# AdventureWorks Analysis Report

Team 6: JoonHee, Lucca, Yui

## Agenda

## 01 About Company

Information of AdventureWorks2016 as industry, sales, and customers.

#### 02 Analysis

3 marketing questions:

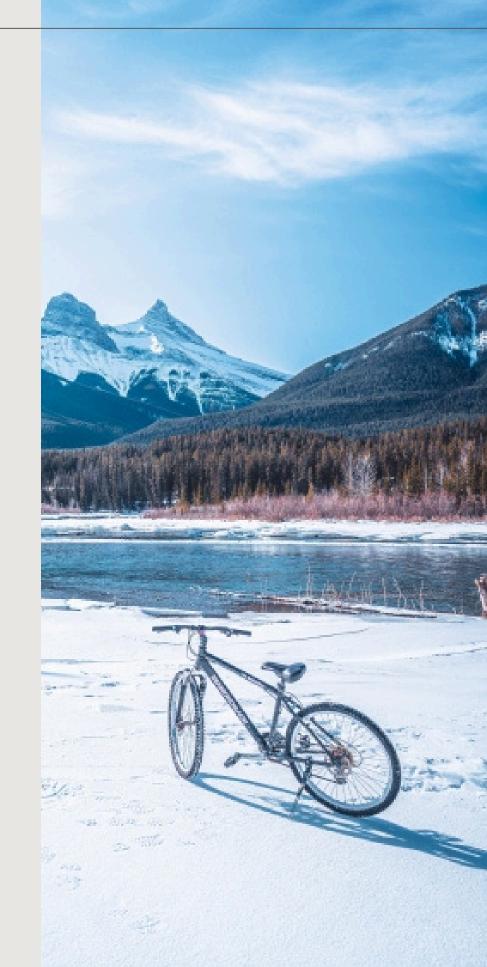
- Profit and seasonality
- Overall trend of the data
- Experienced significant losse

#### 03 Next Step

Give recommendations based on data for how to improve the company's profitability.

## 04 Reference Data

Additional Materials: SQL queries and links to external resources.



## Summary



#### Background

AdventureWorks is a sporting goods retailer; based on three years of data from June 2011 to June 2014. (a) The number of cliants is half B2B and half B2C. (b)

The company's main customers in the U.S. and Canada, but it also has sales in Australia and the Europe.



#### **Results Summary**

Data from the summer of 2011 through the summer of 2014 shows that profits were high throughout the year. Additionally, there is seasonality in the company's sales.

Sales declined significantly in early 2012. This impact was not resolved until the end of the data period.



#### Next Steps

Consider the discount sales in early 2012 that resulted in significant losses. Discounts for inventory clearance should be planned. If the sales had been planned, the loss could have been greatly reduced.

Provide a sales forecast for the next 12 months based on current sales.

## 01 About Company

#### **Industry:**

Bike retail

#### **Sales Target:**

Worldwide (c)

#### **Clients:**

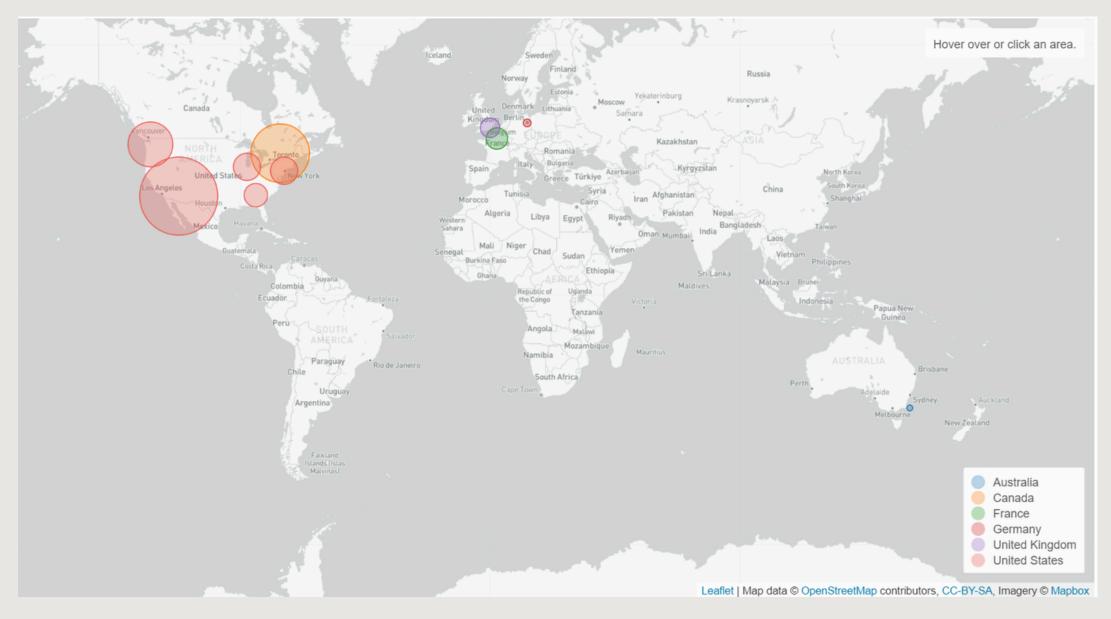
Companies, individuals

#### Top3 countries in sales:

US 1.64B,

Canada 0.65B,

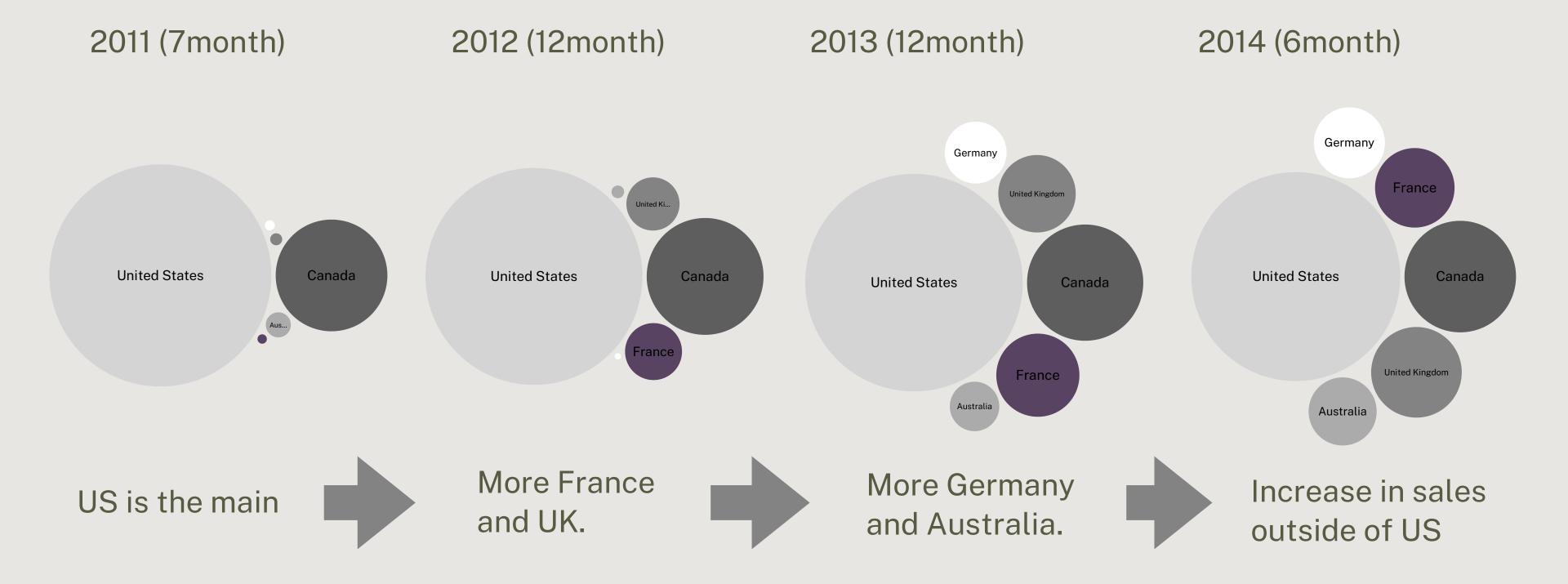
France 0.18B



Scale of Sales: Data Period: 5/30/2011-6/31/2014

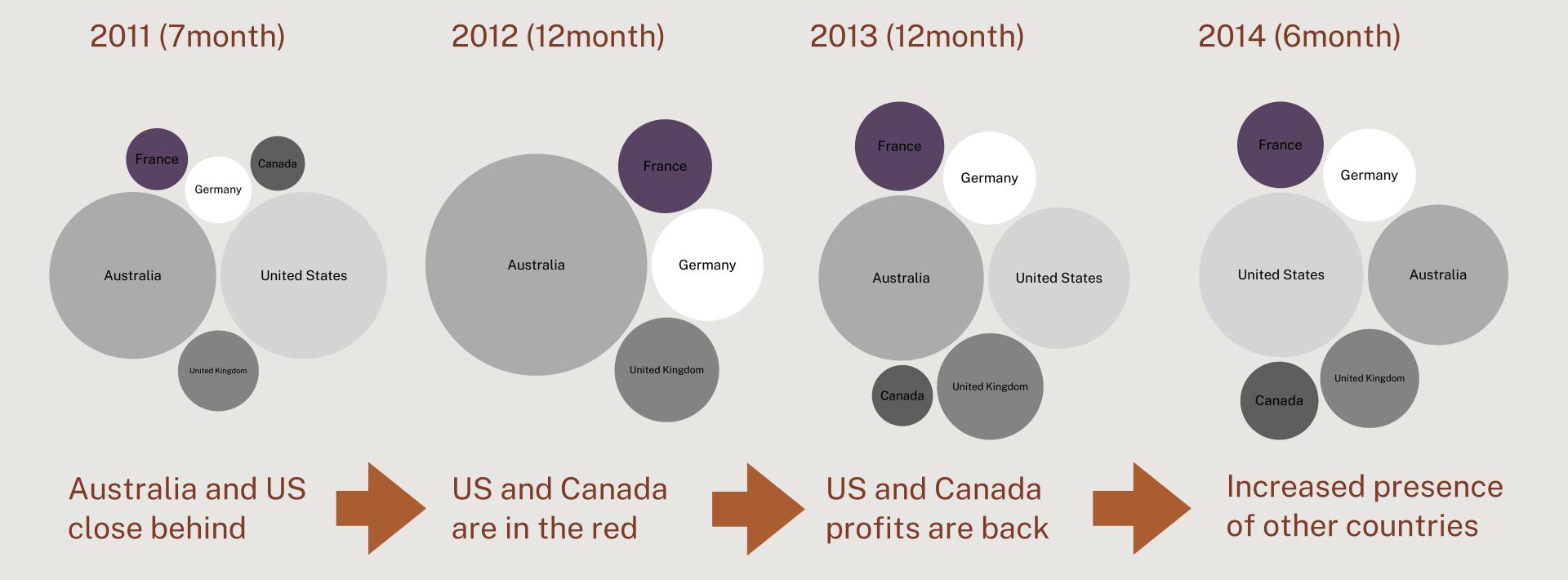
#### Sales

Since the data periods are different, we use ratios.



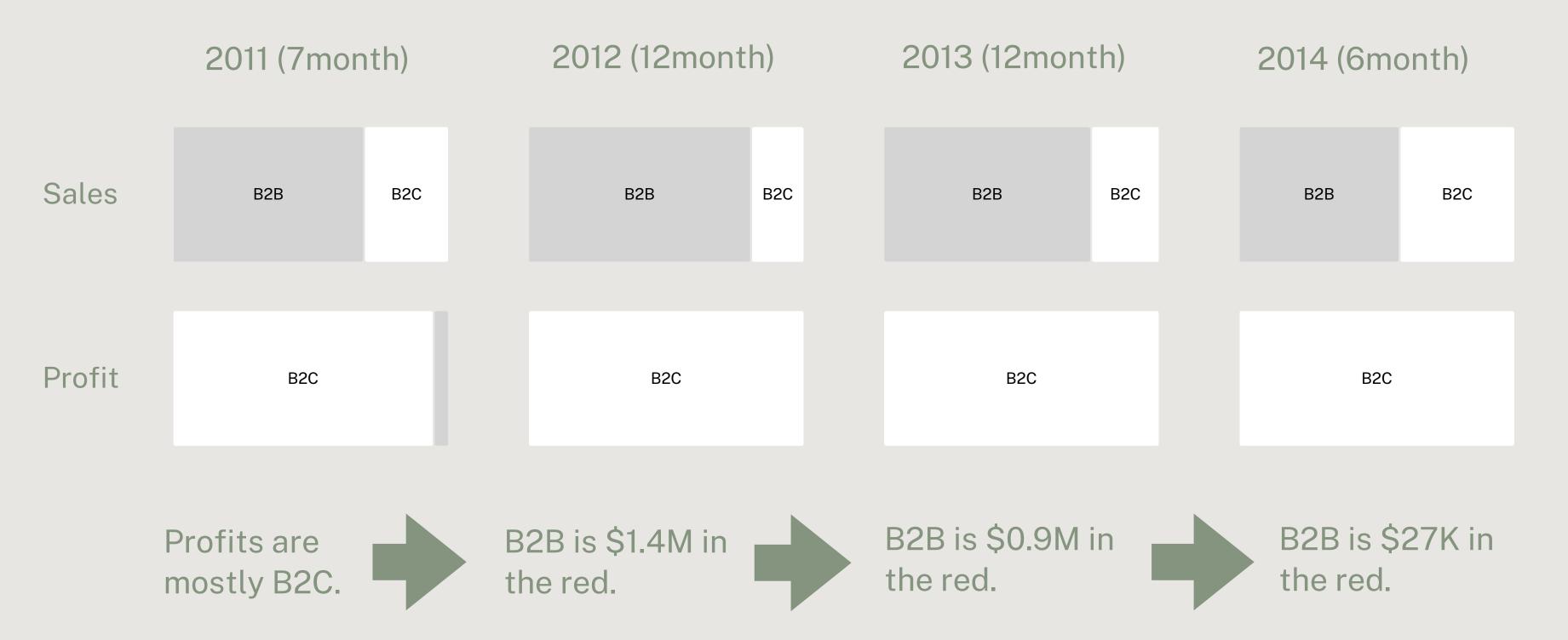
#### **Profits**

Since the data periods are different, we use ratios.



#### B2B / B2C

Since the data periods are different, we use ratios.



## 02 Analysis

#### Q1:

Is the revenue/profitability seasonal?

## A1: Yes.Winter is the highest profit across the years, while Summer shows consistently low profits.

#### Q2:

Is there an upward or downward trend in the company's data over the months and years?

#### A2:

There has been an upward trend in both profitability and revenue over the years.

#### Q3:

Experienced significant losse in April 2012.
Identification and Verification of Causes.

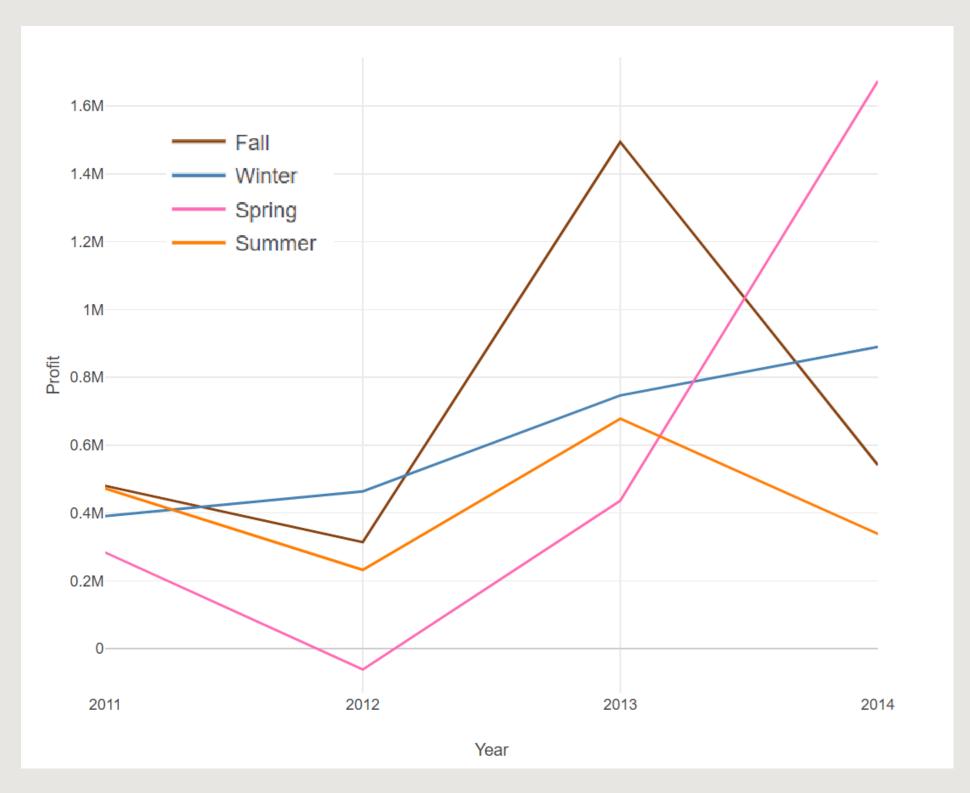
#### A3:

We supporsed this incident reason is a large clearance sale of the Mountain-100 bikes.

## Q1: Is the revenue/profitability seasonal?

Answer: Yes, the profit it's seasonal, Key Seasonal Observations:

- **1.** Winter is consistently the most profitable season.
- **2.** Fall shows high profits in some years but is inconsistent.
- **3.** Spring has mixed results, with both strong and weak years.
- **4.** Summer is the least profitable, with consistently low performance.

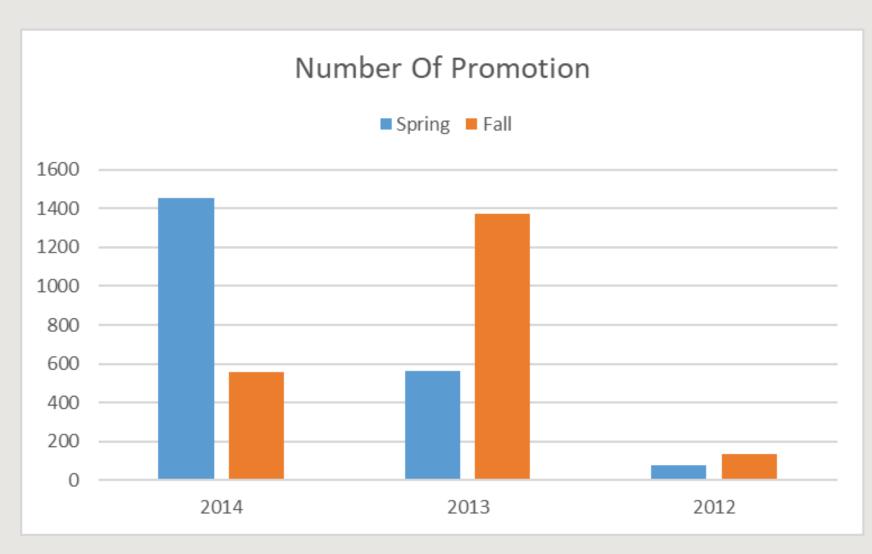


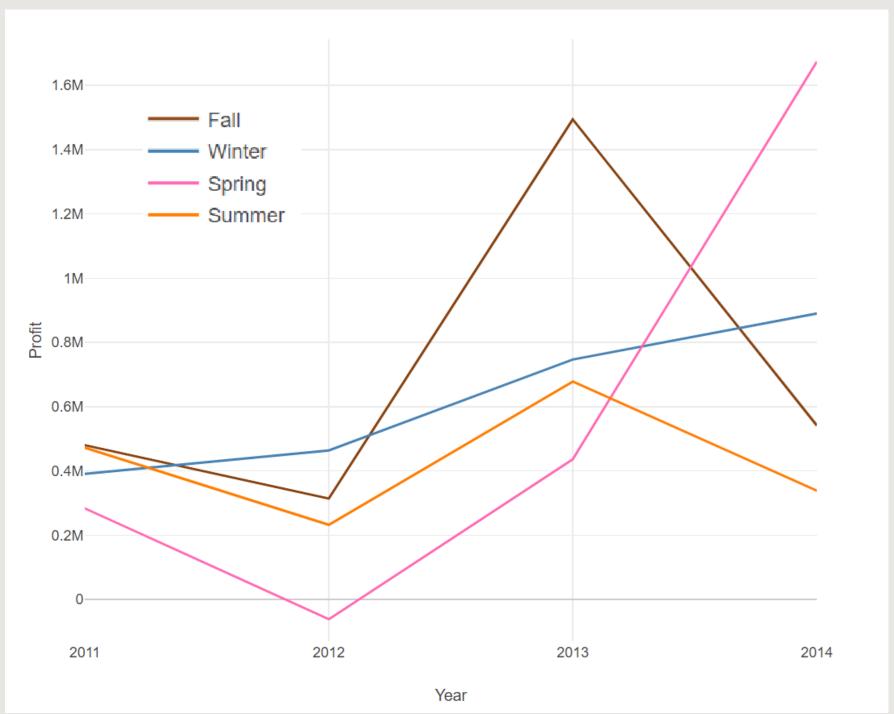
X-axis: year, Y-axis: profit, Line: season

**NOTE**: Australia has opposite seasons. Based on this, we have totaled with the regions.

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X-axis: year, Y-axis: Number

X-axis: year, Y-axis: profit, Line: season

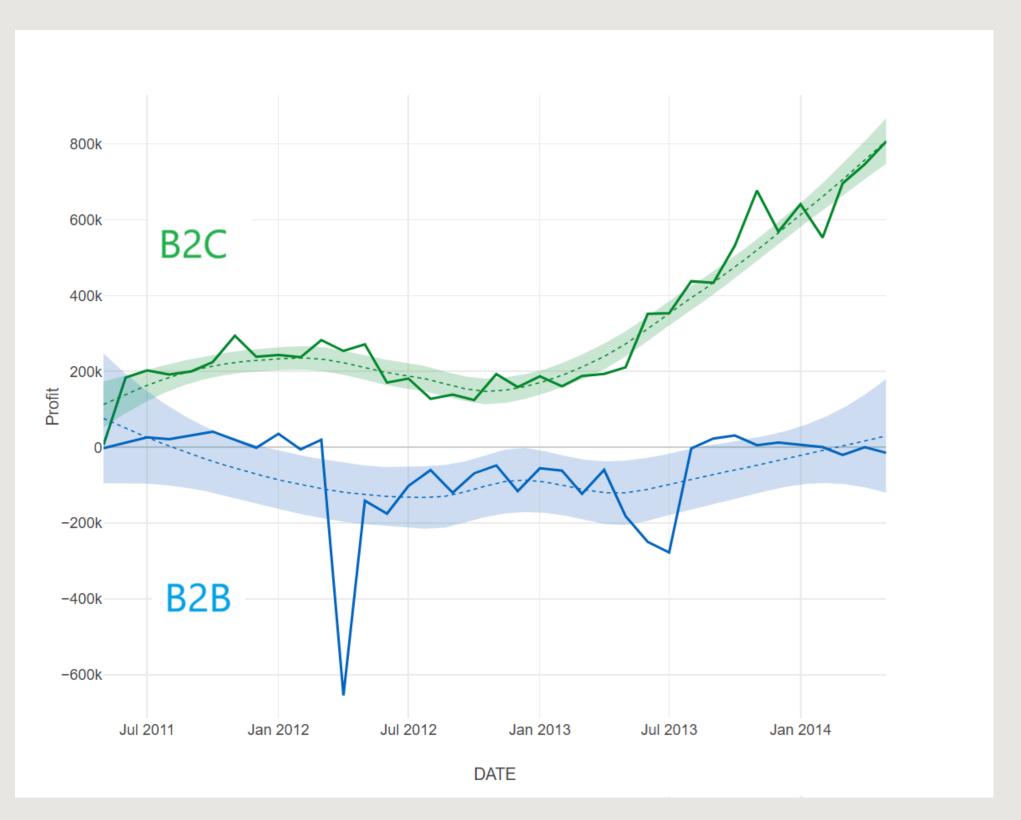
#### Q2:

Is there an upward or downward trend in the company's data over the months and years?

Answer:

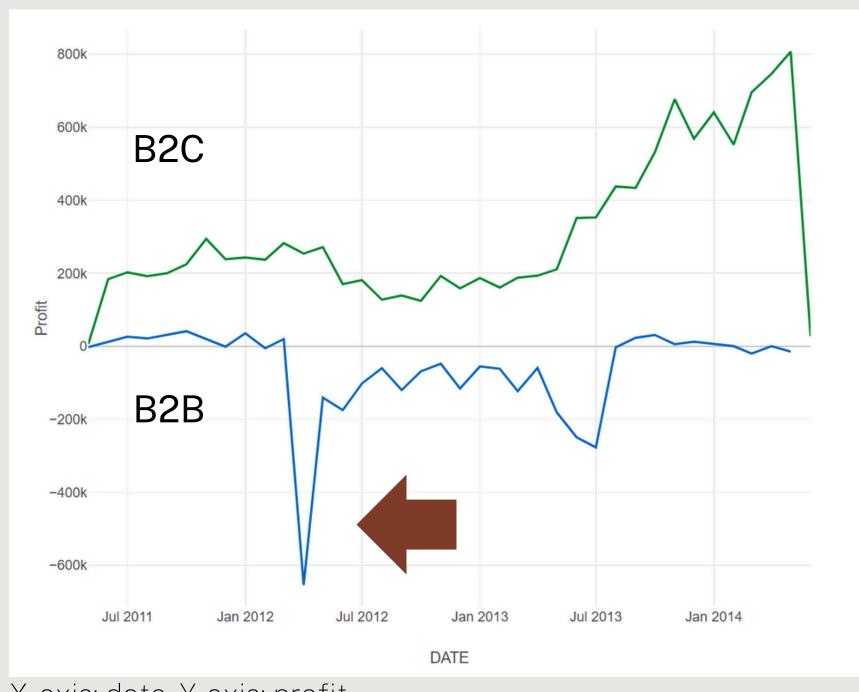
Profitability and revenue have been rising over time.

B2B sales are still unprofitable, but losses are decreasing, suggesting potential profitability in 2015 if the trend continues.



X-axis: date, Y-axis: profit, Background: trend line

### Q3: Experienced significant losse in April 2012. Identification and Verification of Causes.



X-axis: date, Y-axis: profit

To prepare for the launch of the new Mountain-200 and Mountain-300 models, a 35% discount and a huge price

a 35% discount and a huge price decresce were applied to the existing Mountain-100 bikes to clear out inventory.

\$ 3,374

(The original price of Mountain-100)

\$849

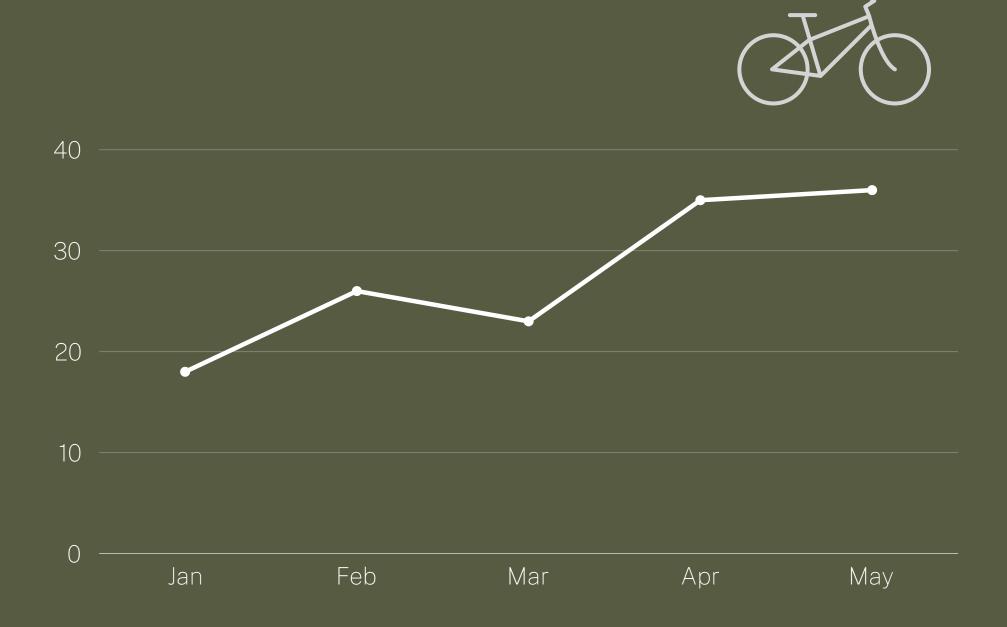
(After the change price of Mountain-100)

## 03 Next Steps

Future Policies and Strategies

#### Measures and Forecasts

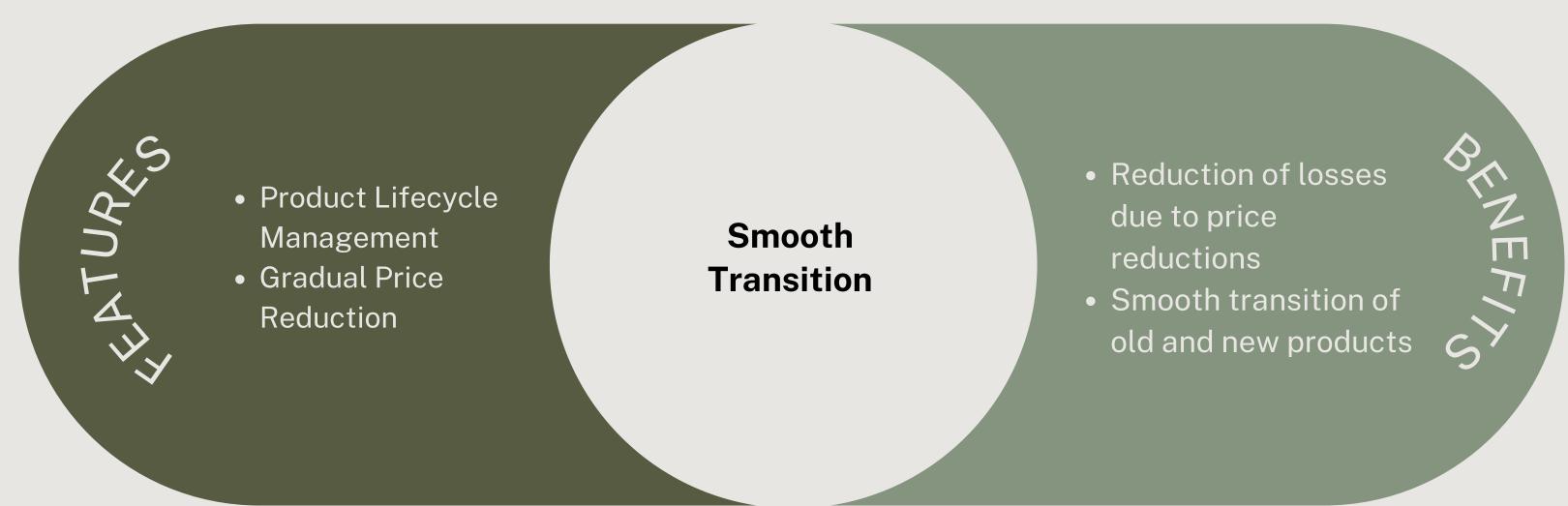
- 1. Countermeasures against the expected drop in profits during inventory disposal.
- 2. Sales projections for the next 12 months.



### 1. Solutions to Minimize Loss



Effect of changing the method of sale

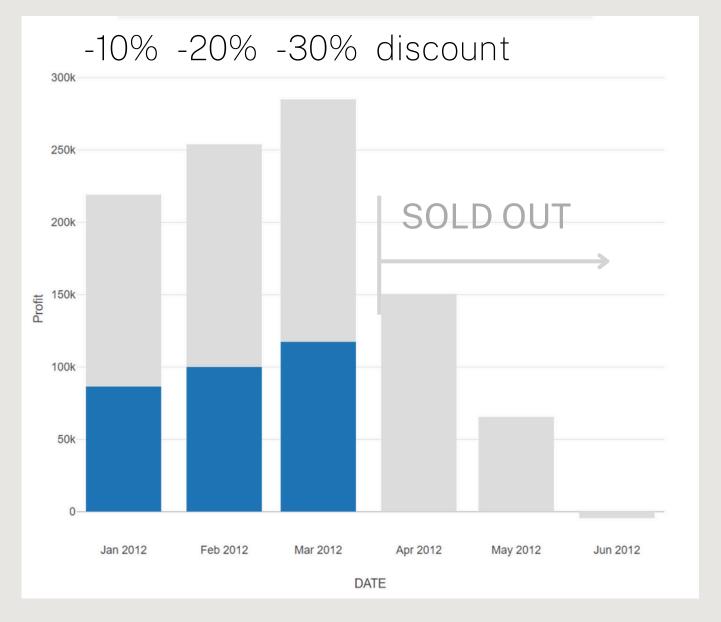


Bike-100 series as a percentage of overall profit (2012 Jan- Jun)

#### **Fact**



#### If... step by step discount

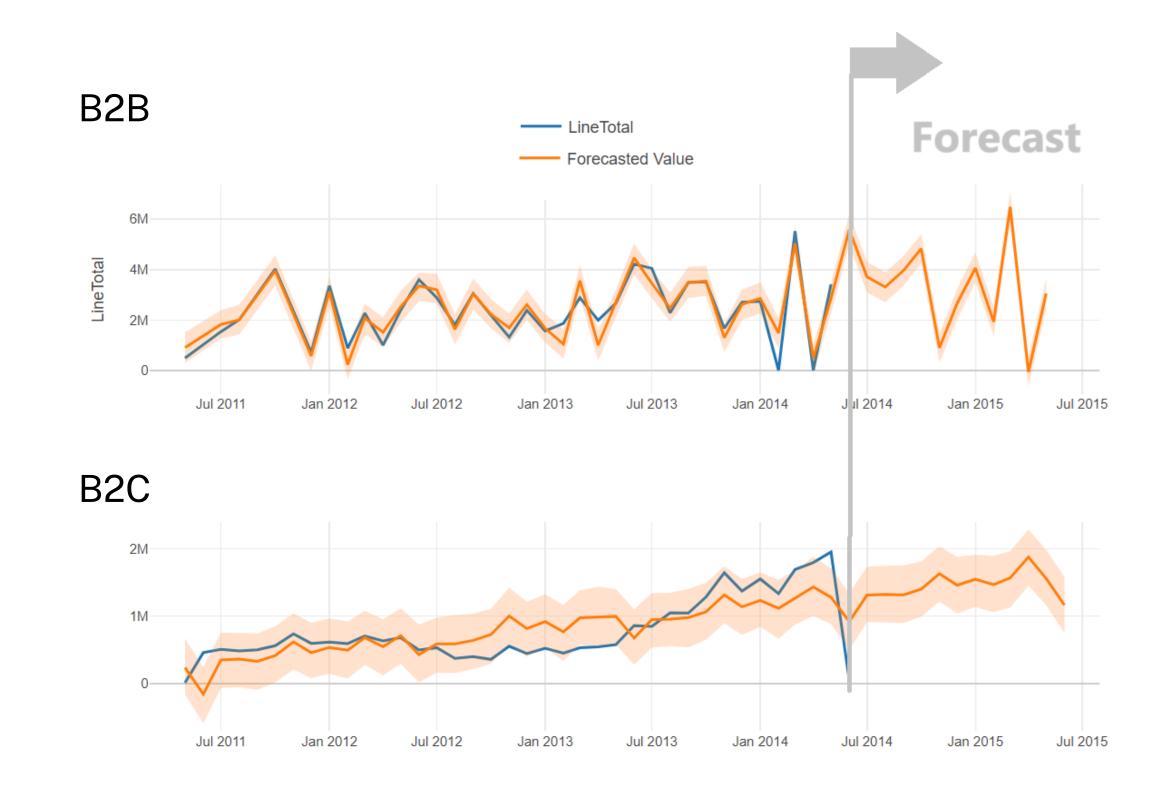


Blue: Bike-100 series (8 products) Grey: Other products

## 2. Revenue Forecast

Next 12 month

We calculated the sales forecast for the next year based on the data from the past three years. BtoB is seasonal, while BtoC grows slowly.



Generalized Additive Model (Prophet) / TOOL : Exploratry

## Reference Data

External document (PDF):

Team6 Final ExternalDocument

All SQL queries (sql file):

Team6 FinalQuery.sql

















































