'Impossible Burger' Impact

Total Sales

Sales By Region

- North East
- South West
- North West
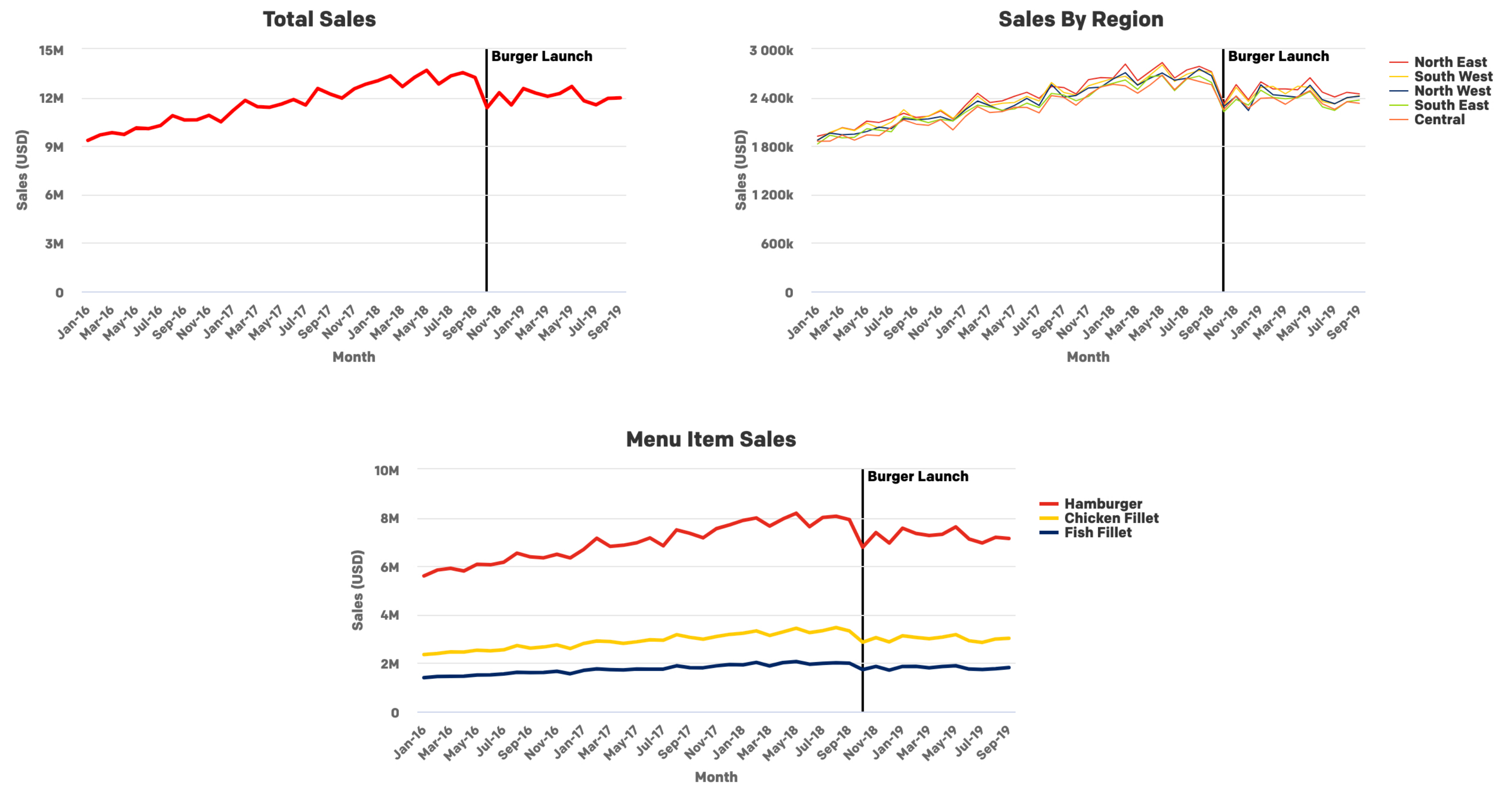- South East
- Central

Menu Item Sales

- Hamburger
- Chicken Fillet
- Fish Fillet

The introduction of the Impossible Burger last October by our competitor, Burger King, sparked the interest of the vegetarian community across the United States. After analyzing the data provided, we have concluded that the release of this new burger has impacted the sales of McDonald's.

During the month of the Impossible Burger's release, October 2018, McDonald's total sales dropped $1,873,234 (14.1%) when compared to the September 2018 sales. Although fluctuation in sales are normal and expected, the average drop up to this date, January 2016 through September 2018, was just 2.7% with the highest occurring on June 2018 at 6.2%. The performance and fluctuation in sales across the five different regions were similar as depicted above. Nonetheless, each of these regions faced dips upon the burger's release. The North Eastern region saw a decline of 14.3%, the South West 15.5%, the North West 14.3%, the South East 14%, and Central 12% during October 2018.

The three menu items analyzed includes the Hamburger, Chicken Fillet, and Fish Fillet. As McDonald's is predominantly known for its hamburgers, it comes as no surprise that its sales are significantly greater than the other two menu items. However, each of these items dipped uncharacteristically at the release of the Impossible Burger. The Fish Fillet sales declined 13.3%, the Chicken Fillet declined 14%, and the Hamburger had the greatest decline at 14.4%. Each of these menu items had an average decline under 3% during the January 2016 to September 2018 period.

Since the burger's release, McDonald's total sales have grown 5.3%. This same period of time, October 2017 through September 2018, previously resulted in a growth of 10.7%. This slow growth has distributed itself across all regions and menu items as depicted in the charts above. It must be noted that we cannot associate this complete loss of sales to the Impossible Burger alone as there can be many other factors at play here. However, we have strong evidence to believe that it has indeed played a significant role. Clearly, changes will need to be made to subdue the effects of the Impossible Burger.
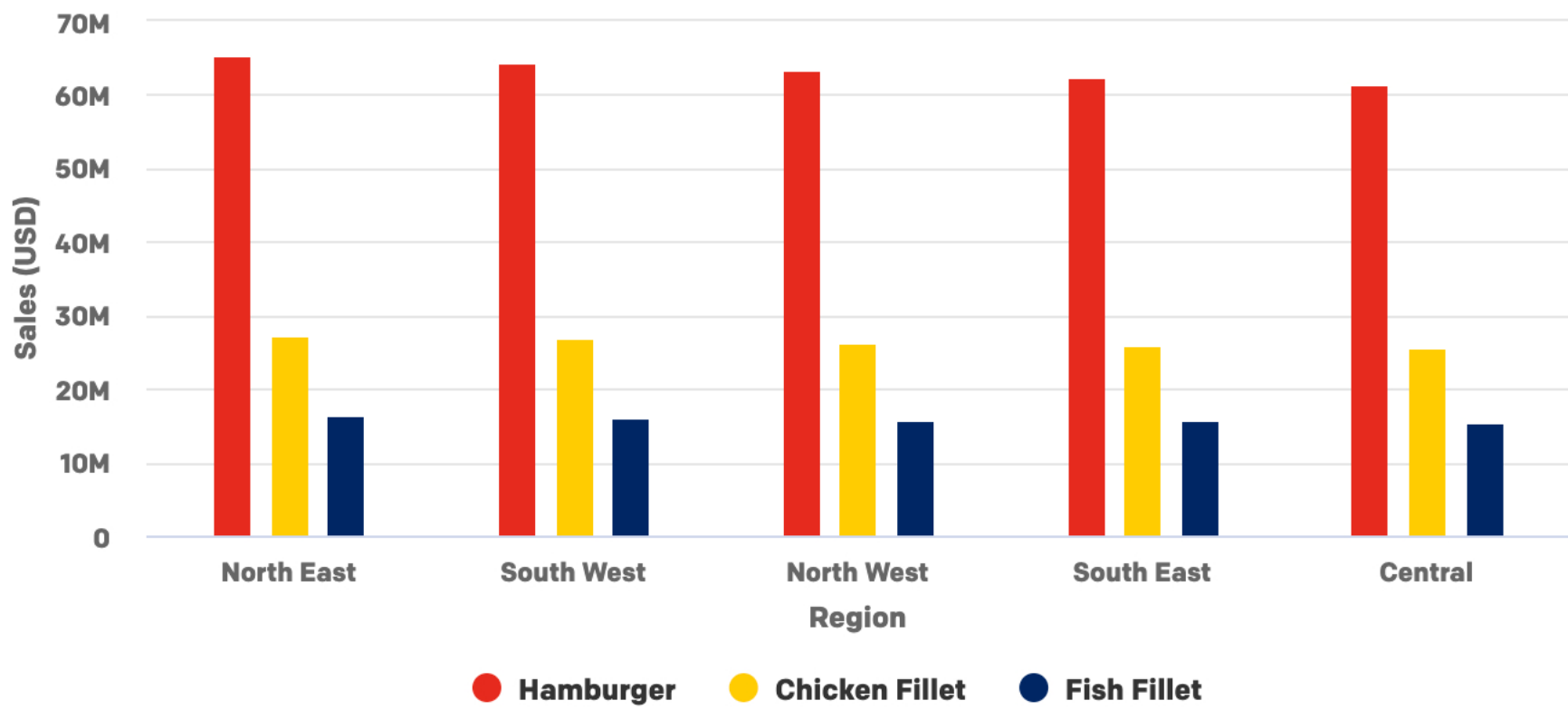
Consumer Trends

Menu Item Sales Composition

- Hamburgers
- Chicken Fillet
- Fish Fillet
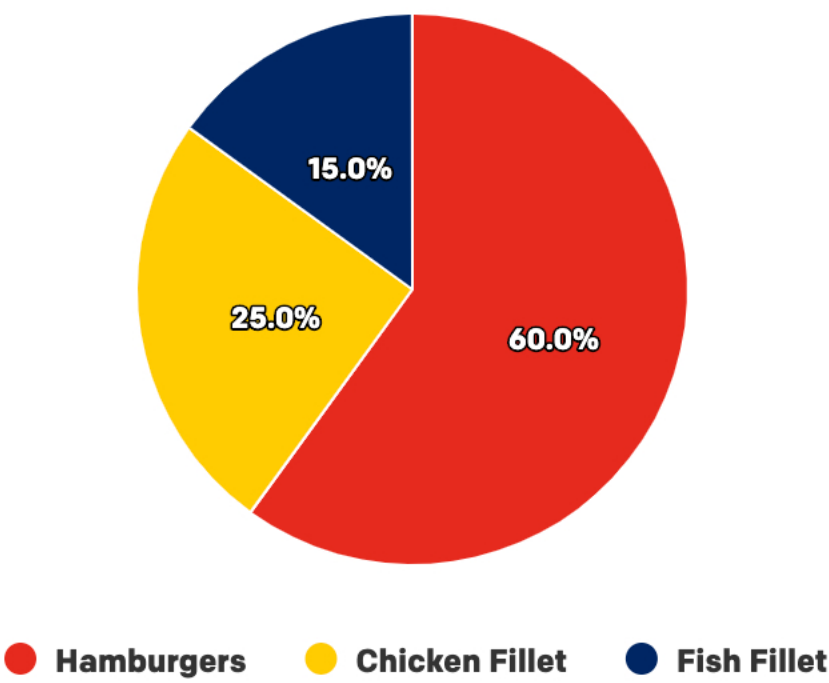
Average Fish Fillet Sales By Weekday (Jan 2016)
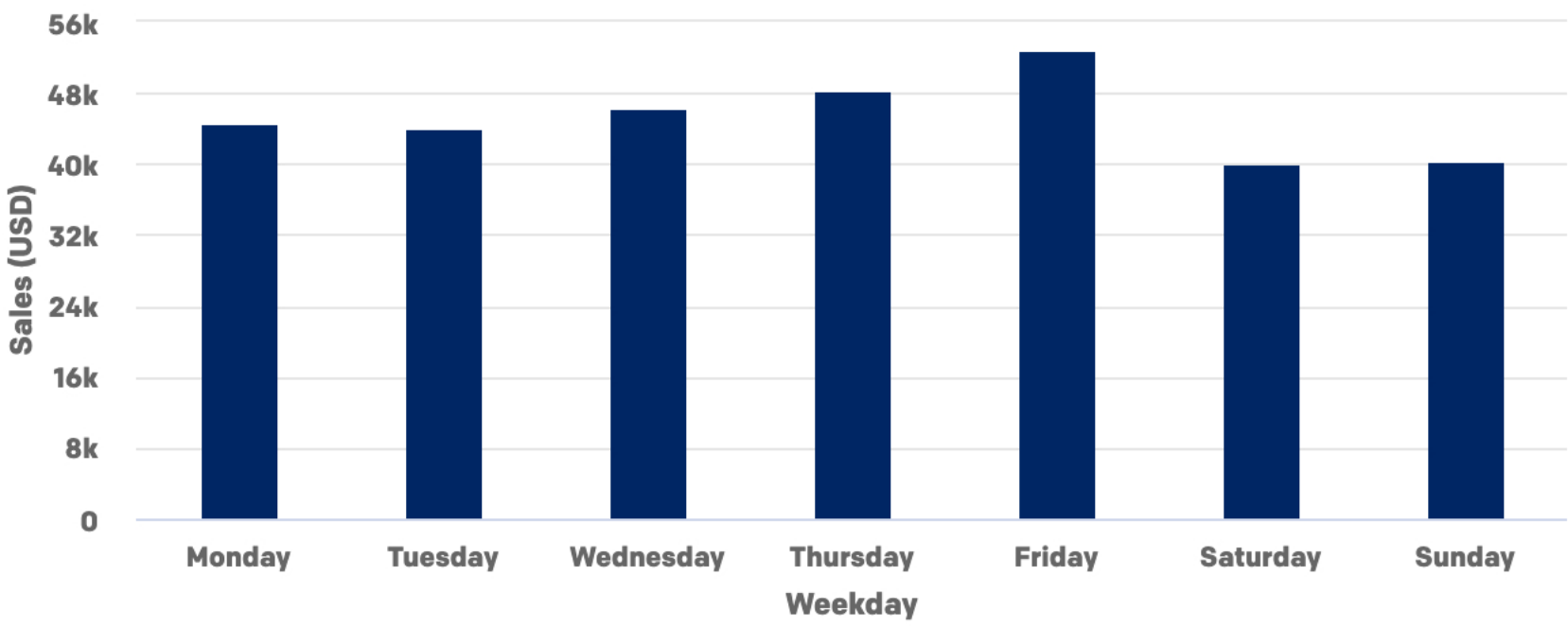
Menu Item Sales By Region

- Hamburger
- Chicken Fillet
- Fish Fillet

After an in-depth analysis of the data provided, we have gained a greater understanding of customer interactions and behaviors. The Data Science team anticipates that these finding will drive sales and help outperform our competitors.

Over the lifetime of the data, January 2016 through September 2019, menu item sales have been consistently divided with Hamburger sales topping the list at 60%, Chicken Fillet at 25%, and Fish Fillet at 15% of sales. Surprisingly, this composition remained the same prior to and after the release of the Impossible Burger. No evidence of the burger's release affecting customer's menu item selections was found.

Customer behavior across the different regions of the United States also appear to be strikingly similar as each region generally follows the 60/25/15 split as mentioned above. Despite the common belief that different regions have their own tendencies, the data does reflect such behaviors. This shows that region-specific advertising may not be necessary, and the United States can generally be treated as a single audience when it pertains to these menu items. It is also important to note that the average sales of each month remain relatively uniform with the month of August having a slight, yet insignificant, edge.

Despite the consistencies seen throughout sales and regional behaviors, weekday menu item preferences were uncovered. When analyzing the January 2016 daily sales, Fish Fillet sales were noticeably greatest during Fridays as can be seen in the chart above. Heading into the weekend, Fish Fillet sales then dip 24%. Interestingly, such fluctuations do not occur with the Hamburger and Chicken Fillet as their weekday sales remain relatively consistent.

In order to uncover more trends and customer behaviors, additional sales data will be necessary. Recent daily sales data, much like that provided from January 2016, will be tremendously useful in helping McDonald's better connect with its customers and eliminate the effects of competitor actions.