Bellabeat Case Study: How Can a Wellness Technology Company Play It Smart?

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1. The Ask Phase: Defining the Business Task

Scenario: Bellabeat, a high-tech manufacturer of health-focused products for women, is seeking to unlock new growth opportunities. Urška Sršen, cofounder and Chief Creative Officer, believes that analyzing how consumers use smart devices can provide key insights to guide the company's marketing strategy.

Business Task:
Analyze smart device fitness data to identify trends in user behavior. Leverage these trends to provide high-level, data-driven recommendations for Bellabeat's marketing strategy.

Guiding Questions:

1. What are some trends in smart device usage?
2. How could these trends apply to Bellabeat customers?
3. How could these trends help influence Bellabeat marketing strategy?

Stakeholders:

- Urška Sršen: Cofounder and Chief Creative Officer
- Sando Mur: Cofounder and key executive
- Bellabeat Marketing Analytics Team

2. The Prepare Phase: Sourcing and Evaluating the Data

Data Source:
The analysis was conducted using the FitBit Fitness Tracker Data, a public dataset available on Kaggle. It contains personal fitness data from 30 anonymous FitBit users who consented to the submission of their data, including minute-level physical activity, steps, and heart rate.

Data Limitations & Considerations:

- **Small Sample Size:** Data from only 30 users is not representative of the entire smart device market. Findings should be considered directional and validated against Bellabeat's internal data.
- **Outdated Data:** The data was collected in 2016. User habits and technology may have evolved since then.
- **Lack of Demographic Information:** The data is anonymous and lacks demographic details like age, gender, or location, which limits the potential for deeper, targeted

analysis.

3. The Process Phase: Cleaning and Transforming the Data

The data was processed using **R and RStudio** with the tidyverse suite of packages. The following steps were taken to ensure the data was clean, accurate, and ready for analysis:

1. **Loaded Data:** The dailyActivity_merged.csv file was loaded as the primary dataset.
2. **Standardized Column Names:** All column names were converted to a consistent snake_case format (e.g., TotalSteps became total_steps).
3. **Checked for Errors:** The dataset was checked for duplicates and missing values. No significant errors were found.
4. **Formatted Dates:** The ActivityDate column was converted from a character string to a standardized Date format.
5. **Created New Variables:** A day_of_week column was created to enable analysis of weekly trends.

4. The Analyze & Share Phase: Uncovering Key Insights

Analysis of the cleaned data revealed three primary insights into user behavior, which are presented below with supporting visualizations.

Insight 1: Activity is Directly Tied to Results

There is a strong positive correlation between the number of steps a user takes and the calories they burn. This confirms that users are motivated by seeing a direct return on their effort.
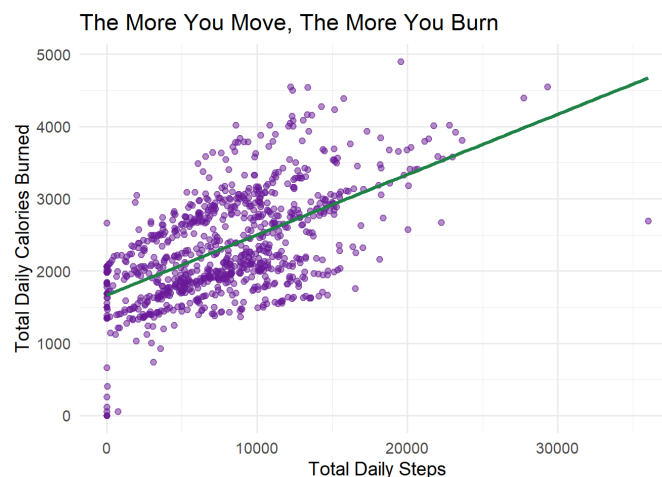
Visualization:

Figure 1: Daily steps are a strong predictor of calories burned.

Insight 2: The "Weekend Slump" in Activity

User activity, measured by average daily steps, is not consistent throughout the week. There is a noticeable decline in activity on Saturday and Sunday.
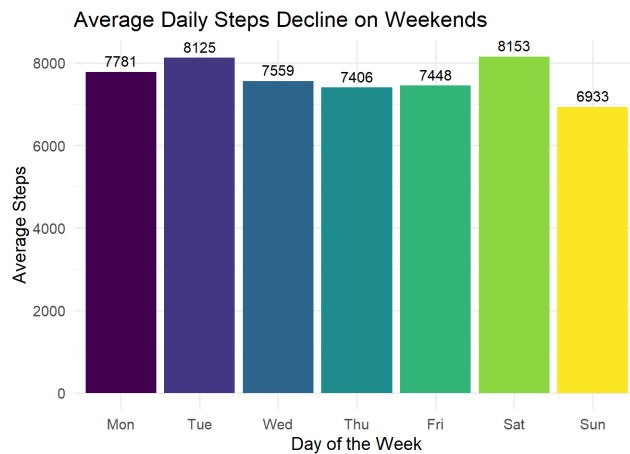
Visualization:

Figure 2: User activity levels are lowest on weekends.

Insight 3: The "Workout Warrior" User Profile

Many users exhibit a pattern of high-intensity activity for short periods, coupled with long periods of sedentary time. This suggests a user who exercises but is otherwise inactive (e.g., an office worker).
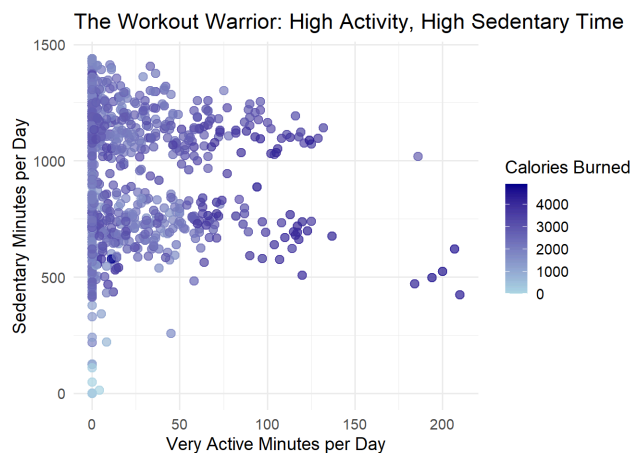
Visualization:

Figure 3: Many users are both highly active and highly sedentary.

5. The Act Phase: Data-Driven Recommendations

Based on the analysis, we propose the following high-level recommendations to guide Bellabeat's marketing strategy:

Recommendation 1: Focus Marketing on Clear Outcomes, Not Just Features.

- **Action:** Shift marketing messaging to emphasize tangible results. Instead of saying "Track your steps," say **"See how a 15-minute walk can impact your daily calorie goals."** Reinforce the direct link between activity and outcome in all marketing channels.

Recommendation 2: Launch a Weekend Engagement Campaign.

- **Action:** Create targeted weekend challenges and content. Use the Bellabeat app to send motivational push notifications on Saturday and Sunday to encourage users to stay active, turning a period of low engagement into a positive brand interaction.

Recommendation 3: Promote a Holistic Wellness Narrative.

- **Action:** Develop content and app features that encourage light, consistent movement to break up long periods of inactivity. This positions Bellabeat as a comprehensive wellness partner that cares about a user's entire day, not just their workout.

Next Steps:

1. **Validate with Internal Data:** Perform this analysis on Bellabeat's own user data to confirm findings.
2. **Develop User Personas:** Create distinct user profiles to enable personalized marketing.
3. **A/B Test Messaging:** Pilot the recommended strategies on small user segments to measure impact before a full launch.