2025 High School Student Case Study Competition

Introduction

Jordan Ellis is a small business owner who is considering expanding his electronics repair company and needs help evaluating the first 9 months of operations to determine how to reach his long-term profit and growth goals.

Background

Jordan, a recent graduate with a degree in Electrical Engineering and a minor in Business Analytics, launched TechFix Solutions in January 2024 after years of repairing electronics as a side hustle during college. Known for his precision and problem-solving skills, Jordan had built a loyal following among students and faculty who trusted him with everything from cracked phone screens to complex motherboard repairs.

TechFix Solutions is based in a mid-sized Midwestern city with a population of approximately 300,000. The city has a growing base of remote workers, university students, and small business owners who rely heavily on their devices for productivity and communication. Jordan identified a gap in the market: while national chains offered basic repairs, they lacked the technical depth and personal service that many customers wanted. His vision was to create a high-skill, high-integrity electronics repair service that combined technical excellence with fast turnaround and transparent pricing.

Jordan leased a 600-square-foot storefront in a busy retail strip near a university and invested $30,000 of his savings into professional-grade tools and equipment, including:

- Soldering and rework stations for board-level repairs
- A reflow oven for fixing GPU and CPU solder joint failures
- Thermal imaging and diagnostic tablets for pinpointing power and overheating issues
- A rotating inventory of high-demand parts like screens, batteries, and charging ports

By September 2024, TechFix had served over 1,200 customers and generated $90,000 in revenue in that month. However, Jordan began to encounter operational and strategic challenges:

- High-use equipment was wearing out faster than expected, especially soldering tips, diagnostic tablets, and thermal cameras.
- Repair times were slipping due to space constraints and technician fatigue.
- Customer expectations were evolving, with more people requesting mobile repairs, same-day service, and data recovery—services TechFix wasn't yet equipped to offer.

At the same time, the local market was shifting. National mail-in repair services and automated kiosks began appearing in big-box stores, offering cheaper and more convenient options. These services appealed to TechFix's core demographic—students and remote workers, leading to a slowdown in new customer growth and increased price sensitivity.

Jordan is now considering two major investments to stay competitive:

1. Opening a second location across town to reduce turnaround times and expand market reach.
2. Purchasing a mobile repair van equipped with diagnostic tools to offer on-site service for homes and businesses.

However, his accountant has raised a red flag. TechFix currently uses straight-line depreciation over five years for all equipment, but this method may be misrepresenting the true cost of high-use tools. The accountant recommends exploring units-of-production or double-declining balance depreciation to better reflect actual usage and guide smarter reinvestment decisions.

Now, Jordan is seeking professional advice to evaluate his financial performance, assess the impact of different depreciation methods, and determine the most strategic path forward for TechFix Solutions in a rapidly evolving market.

Details

Jordan's profit goal is to consistently earn $5,000 per month in net profit by the end of his first year in business. He signed a one-year lease for the 600-square-foot storefront in a high-traffic retail strip near a university, which provides both a steady stream of customers and access to a skilled labor pool from nearby technical colleges. All repairs are done in-house using professional-grade tools and diagnostic equipment, and Jordan maintains a rotating inventory of high-demand replacement parts.

Before opening, Jordan created a detailed budget for January through September 2024 (Table 1). Now in early October, he is reviewing his actual results (Table 2) and is pleased to see that he served over 1,200 customers, exceeding his projected volume, and generated $90,000 in revenue as projected in September. His net profit exceeded the 9-month budget by $1,200, despite higher-than-expected equipment wear and part costs. Tools like soldering irons, diagnostic tablets, and thermal cameras are used daily and may not last the full five years assumed in the original depreciation schedule.

The accountant recommends that Jordan evaluate alternative depreciation methods—such as units-of-production or double-declining balance—to better reflect actual usage and guide future investment decisions. He also suggests that Jordan revisit his pricing model, as some repair types are more labor- and equipment-intensive than others, yet are priced similarly. If Jordan wants to meet his long-term profit goals, he must first address these financial and operational issues.

Task

Jordan has hired your consulting team to evaluate the financial and operational health of TechFix Solutions and to help him make informed decisions about potential expansion.

1. Based on TechFix Solutions' actual results compared to Jordan's original 9-month budget, do you see any reasons why his accountant would be concerned about expanding right away?

2. Based on your analysis, should Jordan move forward with expanding his operations—either by opening a second location or investing in a mobile repair van?

3. What other strategic alternatives, operational improvements, or service innovations could help him reach his profit goals more sustainably?