

## Exercise 4

### Part I: Business Case Instructions

Section	Description
Market Situation	<ul style="list-style-type: none"><li>• Define the market situation</li><li>• Provide supporting information</li></ul>
Opportunity	<ul style="list-style-type: none"><li>• Summarize the market opportunity</li><li>• Describe how the company can benefit</li></ul>
Envisioned Solution	<ul style="list-style-type: none"><li>• Describe the envisioned product solution</li><li>• Summarize how the team arrived at the solution</li><li>• Describe why this solution is better than alternatives</li></ul>
Objectives and Assumptions	<ul style="list-style-type: none"><li>• Describe the market objectives that are being pursued</li><li>• Define the business assumptions</li></ul>
Costs	<ul style="list-style-type: none"><li>• Define product solution costs</li><li>• List required resources</li></ul>
Strategic Alignment	<ul style="list-style-type: none"><li>• Illustrate how this product solution aligns with organizational needs</li><li>• Summarize how the product concept aligns with organizational goals</li></ul>
Timing	<ul style="list-style-type: none"><li>• Describe project timing</li><li>• Map timing to the market need</li><li>• Recommend an investment strategy</li></ul>
Cost Benefit Analysis	<ul style="list-style-type: none"><li>• Provide a financial analysis—Illustrate costs vs. benefits</li><li>• Define what happens if the company does not proceed</li></ul>
Risk	<ul style="list-style-type: none"><li>• Identify major risks</li><li>• Document contingency responses/mitigations</li></ul>
Initial Investment and Recommendation	<ul style="list-style-type: none"><li>• Define the initial investment requirements</li><li>• Define long-term investment requirements</li></ul>

## Part II: Business Case Blank Template

Section	Description
Market Situation	<ul style="list-style-type: none"><li>The air purifier market is experiencing significant growth, with a projected compound annual growth rate (CAGR) of 11.4% from 2023 to 2030. However, current HEPA air purifiers have notable shortcomings, including inefficiency in removing volatile organic compounds (VOCs), viruses, and odors, as well as concerns regarding ozone generation, high maintenance costs, and limited coverage area. Customers are seeking improved solutions that address these issues comprehensively while ensuring clean and safe indoor air quality.</li></ul>
Opportunity	<ul style="list-style-type: none"><li>There is a clear opportunity for Perfect Purifiers LLC (PP LLC) to capitalize on the growing demand for effective air purification solutions by innovating its current HEPA air purifier line. By addressing market shortcomings and offering enhanced features, PP LLC can position itself as a leader in the industry and capture a significant share of the expanding market.</li></ul>
Envisioned Solution	<ul style="list-style-type: none"><li>PP LLC plans to design and develop a new line of HEPA air purifiers that effectively eliminate VOCs, viruses, and odors from the air, while minimizing ozone emissions, maintenance requirements, and filter replacement costs. The envisioned solution includes three distinct purifier models at various pricing levels to cater to diverse customer needs and budgets.</li></ul>
Objectives and Assumptions	<ul style="list-style-type: none"><li>Objective: To design and develop three prototypes of HEPA air purifiers with enhanced features and functionalities.</li><li>Assumptions:</li><li>Increased revenue by 25%.</li><li>Expansion of the existing market by 10%.</li><li>Reduction in product returns by more than 50% post-launch.</li></ul>
Costs	<ul style="list-style-type: none"><li>Initial investment: \$80,000 for prototype development.</li><li>Expected returns: Annual revenue exceeding \$200,000 for two years.</li><li>Internal Rate of Return (IRR): Estimated to be more than 200%.</li></ul>
Strategic Alignment	<ul style="list-style-type: none"><li>The new HEPA air purifier line aligns with PP LLC's vision to expand sales and the current market by offering innovative air filtration technology to benefit customers. By addressing market demands and enhancing product offerings, PP LLC aims to strengthen its position in the industry and achieve sustainable growth.</li></ul>

Timing	<ul style="list-style-type: none"> <li>• Design Phase: January - March</li> <li>• Development Phase: February - April</li> <li>• Beta Testing: May</li> </ul>
Cost Benefit Analysis	<ul style="list-style-type: none"> <li>• Benefits: Increased revenue, market expansion, reduced product returns, enhanced brand reputation.</li> <li>• Costs: Initial investment in prototype development, operational expenses.</li> </ul>
Risk	<ul style="list-style-type: none"> <li>• Engineering delays, cost overruns, supply chain issues, and distribution channel price increases are identified as primary risk factors.</li> <li>• Mitigation strategies include effective project management, risk assessment, and collaboration with supply chain partners.</li> </ul>
Initial Investment and Recommendation	<ul style="list-style-type: none"> <li>• Based on the projected returns and strategic alignment with PP LLC's goals, it is recommended to proceed with the development of the new HEPA air purifier line. The initial investment of \$80,000 for prototype development is justified by the expected benefits of increased revenue, market expansion, and enhanced brand reputation. The new product line presents a valuable opportunity for PP LLC to capitalize on the growing demand for effective air purification solutions and strengthen its competitive position in the market.</li> </ul>