

### Exercise 1

**Part I:** Use this Product Concept development checklist

Product Concept Development Checklist	
Recommended Entry	Considerations
Market Problem or Opportunity	<ul style="list-style-type: none"> <li>• Market problem or opportunity clearly defined</li> <li>• Considerations include reduced consumer costs, improved features and functionality, or satisfying a gap or niche as applicable</li> </ul>
Market Segments	<ul style="list-style-type: none"> <li>• Market segments defined</li> <li>• Multiple segments prioritized</li> </ul>
Key Financials	<ul style="list-style-type: none"> <li>• Cost and benefits defined</li> <li>• Key financial metrics (ROI, IRR, NPV) calculated</li> </ul>
Market Window	<ul style="list-style-type: none"> <li>• Launch and delivery milestones outlined</li> <li>• Urgency considerations defined</li> </ul>
Competitive Landscape	<ul style="list-style-type: none"> <li>• A list of top competitors is provided</li> <li>• Competitor advantages and disadvantages documented</li> <li>• Competition strategy defined</li> </ul>
Main Features and Functionality	<ul style="list-style-type: none"> <li>• MVP concept defined</li> <li>• Version feature schedule documented</li> </ul>
Key Differentiators	<ul style="list-style-type: none"> <li>• Company strengths and leverage plan documented</li> <li>• Company weaknesses and mitigation plan documented</li> </ul>
Go to Market Logistics	<ul style="list-style-type: none"> <li>• Delivery options defined</li> <li>• Delivery logistics outlined</li> </ul>
Business Success Measurements	<ul style="list-style-type: none"> <li>• Key Performance Indicators (KPI) listed</li> <li>• Measurement Plan provided</li> </ul>

**Part II:** Complete for your product

Product Concept Document	
Product:	
Recommended Entry	Considerations
Market Problem or Opportunity	<ul style="list-style-type: none"> <li>The air purifier market is growing rapidly, with a projected increase from USD 7.0 billion in 2023 to USD 13.4 billion by 2030</li> <li>Current HEPA air purifiers have several issues, such as the inability to remove VOCs and viruses, inability to eliminate odors, ozone generation, high maintenance needs, expensive replacement filters, noise, and limited coverage[<sup>1</sup>].</li> <li>No existing product fully addresses all these issues, providing Perfect Purifiers LLC with an opportunity to differentiate itself in the market[</li> <li>Increasing consumer awareness and concern about air quality and health create a favorable environment for launching an improved air purifier</li> <li></li> </ul>
Market Segments	<ul style="list-style-type: none"> <li><b>Primary Consumers:</b> Households with adults above the age of 35, who are the most likely to purchase air purifiers[<sup>1</sup>].</li> <li><b>Consumer Needs:</b> Customers want air purifiers that are safe, efficient, reasonably priced, and capable of eliminating a wide range of contaminants.</li> </ul>
Key Financials	<ul style="list-style-type: none"> <li><b>Initial Costs:</b> The estimated initial costs to build three distinct prototypes with five features are \$80,000</li> <li><b>Expected Returns:</b> The returns are projected to exceed \$200,000 annually for two years</li> <li><b>Internal Rate of Return (IRR):</b> The IRR is estimated to be more than 200%</li> <li><b>Net Present Value (NPV):</b> While the exact NPV is not provided, the high IRR and expected returns indicate a positive NPV.</li> </ul>
Market Window	<ul style="list-style-type: none"> <li><b>Timing:</b> Perfect Purifiers LLC aims to launch the new product line within the next six months to capitalize on the summer season, which has recently experienced hazardous air conditions[.</li> <li><b>Market Readiness:</b> Consumers are increasingly concerned about air quality and are looking for optimal product solutions, making this an ideal time to introduce an improved air purifier</li> <li></li> </ul>
Competitive Landscape	<ul style="list-style-type: none"> <li><b>Primary Competitors:</b> The main competitors in the HEPA air purifier market include Donaldson Company Inc., Hengst,</li> </ul>

	<p>MANN+HUMMEL, Honeywell International Inc., and Daikin Industries Ltd</p> <ul style="list-style-type: none"> <li>• <b>Market Differentiation:</b> No existing product fully addresses all the issues cited by customers, such as the inability to remove VOCs and viruses, eliminate odors, and reduce ozone emissions. This provides Perfect Purifiers LLC with an opportunity to differentiate itself by developing a superior HEPA air purifier that resolves these problems</li> <li>•</li> </ul>
Main Features and Functionality	<ul style="list-style-type: none"> <li>• <b>Dual HEPA Purifier with Air Freshener:</b> This feature enhances air quality and freshness[^i^].</li> <li>• <b>Noise Reduction:</b> The purifiers will be designed to reduce noise levels by 50%, making them quieter[^i^].</li> <li>• <b>Improved HEPA Filter:</b> Easier to remove and replace, less expensive, and extends filter life to one and a half years[^i^].</li> <li>• <b>Ozone Reduction:</b> Aims to eliminate or significantly reduce ozone generation, addressing a major health concern[^i^].</li> <li>•</li> </ul>
Key Differentiators	<ul style="list-style-type: none"> <li>• <b>Comprehensive Contaminant Removal:</b> The new HEPA air purifiers are designed to address multiple issues that current products do not, such as removing VOCs, viruses, and odors, while also reducing ozone emissions[^i^].</li> <li>• <b>Enhanced User Experience:</b> The purifiers will feature reduced noise levels, easier and less expensive filter replacements, and wider purification coverage, making them more user-friendly and efficient</li> </ul>
Go to Market Logistics	<ul style="list-style-type: none"> <li>• <b>Distribution Channels:</b> Perfect Purifiers LLC plans to leverage its existing solid distribution network, which includes wholesale, retail, and online channels, to effectively reach a wide range of customers[^i^].</li> <li>• <b>Risk Management:</b> Key risk factors such as engineering delays, cost overruns, supply chain issues, and distribution channel price increases have been identified. Sarah Newton, with her strong risk management background and supply chain contacts, will manage the project to mitigate these risks</li> <li>•</li> </ul>
Business Success Measurements	<ul style="list-style-type: none"> <li>• <b>Market Share and Sales:</b> Measure the current versus post-launch market share and sales to evaluate the product's market penetration and acceptance[^i^].</li> <li>• <b>Revenue and Profitability:</b> Track revenue and profitability to ensure the new product line meets financial expectations and contributes positively to the company's bottom line[^i^].</li> </ul>

	<ul style="list-style-type: none"><li>• <b>Customer Satisfaction:</b> Assess customer satisfaction through surveys and feedback to gauge the product's performance and identify areas for improvement[^i^].</li><li>• <b>Return on Investment (ROI):</b> Calculate the ROI to determine the financial return relative to the initial investment, ensuring the product line is financially viable</li><li>•</li></ul>
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