GSCMI
Purdue Case Competition
Team

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Executive Summary

**Objective**

- **Bill, VP Supply**
  - Current shipping routes and 100% demand filled
  - New logistic plan

- **Carly, CFO**
  - Close or reduce plant capacity
  - Exit market to maximize profits

- **Arun, VP Strategy**
  - Exchange rate fluctuations
  - Flexible supply chain

**Recommendation**

- Operate all the existing plants with new logistic plan to meet 100% demands
- Implement Coronavirus response plan for China location
- Use our Strategic Sourcing Model (SSM) to add flexibility and responsiveness to the supply chain
- Look to alternate European countries like Portugal or Austria to replace Turkey as long-term plan

- Turkey currency risk loss
- Increase supply chain resiliency

- $4 M/yr
- $2 M/yr
- $2 M/yr
Agenda

- Introduction
- Solution
- Our Strategic Sourcing Model (SSM)
- Implementation Plan
- Risk and Mitigation
- Conclusion
Current Supply Chain Overview

**US**
- Biggest Market for GIDGET
- Local production capacity less than domestic demand
- 7 Day lead time to USA

**Turkey**
- Accessibility to the European market
- Lowest profit margin
- 15 Day lead time to USA

**Mexico**
- Highest profit margin
- United States – Mexico – Canada Agreement
- 7 Day lead time to USA

**China**
- Coronavirus (COVID-19)
- Lowest COGS
- Highest unutilized capacity
- 30 Day lead time to USA
Optimization Model

- Customer Fulfillment rate 100%
- All plants open

Current Position

Optimization Plan

Coronavirus Response Plan

- Customer Fulfillment rate 100%
- All plants open
Use retained earnings to meet account payable requirements

Seamless return to production due to continued vendor relations.
Monte Carlo (MC) Simulation

- 80% likelihood of making approximately $2 Million more if we stop production plant in Turkey

Graph showing MC Simulation with percentiles and profit levels with and without Turkey.
Strategic Sourcing Model

- Economic Sustainability: 30%
- Financial Sustainability: 30%
- Environment Sustainability: 20%
- Geo-political Sustainability: 20%

Introduction | Solution | SSM | Implementation Plan | Risk and Mitigation | Conclusion
Strategic Sourcing Model - Europe

- 6 locations analyzed in Europe. Portugal and Austria were selected by SSM model
- Further site survey to be completed as per implementation plan
Strategic Sourcing Model- Asia

- 6 locations analyzed in Asia. Taiwan and Malaysia are selected by SSM model
- If Coronavirus persists in Chinese market site survey to be conducted
Implementation Plan

Site survey
Setúbal, Portugal (brownfield)
Braga, Portugal (greenfield)

Southern Vienna, Austria (brownfield)
Linz, Austria (greenfield)

Conduct Site Survey
Q2-Q4 2020

Finalize LP/SSM

Procurement/Leasing of PP&E
Q1-Q2 2021

Roll RFQ to the Suppliers, PO, Leasing Workers
Q3-Q4 2021

Commercialize system through 3PL collaboration
Q1 2022

Turkey Scenario
- Feb 2021: Align worker contracts with projected closure 2022
- Feb 2022: Initiate termination notices based on TLA 4857, Article 25 timelines
- March 2022: Turkey plant shutdown
Risk Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
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<tbody>
<tr>
<td><strong>High</strong></td>
<td><strong>Medium</strong></td>
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<tr>
<td>• <strong>China Coronavirus</strong> – Indefinite production, market, and supply channel curtailment</td>
<td>• Utilize other market profits to offset increased accounts payable/receivable risks</td>
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<td>• <strong>Capacity Limits</strong> – USA operating at 100% to meet local demands is not a sustainable solution</td>
<td>• Build safety stock system to service the USA market Inventory initial setup cost: $2.6 M (7488 units)</td>
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<td>• <strong>Political Conflict</strong> – Diminished cross-relationship between Turkey and USA</td>
<td>• Maintain relationship with Turkey during European production transition plan</td>
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<td>• <strong>Quality control risk</strong> – Quality might suffer because of the nascent phase</td>
<td>• Extensive training to the workforce and experience QC managers.</td>
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Conclusion

- Maintain positive China vendor relations using profits to finance accounts payable
- Start transition European Union supplier based on implementation plan

Supply
- Demonstrate ‘Customer First’ stance by meeting 100% demand without increasing price

Strategy
- Apply our Strategic Sourcing Model (SSM) to add flexibility to the supply chain

Finance
- Utilize Optimization Model to maximize profits in short-term

Introduction  Solution  SSM  Implementation Plan  Risk and Mitigation  Conclusion
THANK YOU
Appendix

• **6 Key Factors**
• Short-term / Long-term Planning
• **Monte Carlo Simulations**
• Currency Trends
• SSM: Overall
• SSM: Geopolitical
• **Safety Stock**
  • Quantity
  • Cost
  • Sourcing (China)
  • Sourcing (Mexico)
• **EOQ Variable Demand**
• Collaborative Planning
• Cash to Cash Cycle

• **LP Model**
  • Demand Actual / Scenario SPOT
  • Demand Actual / Scenario Future
  • Demand High / Scenario SPOT
  • Demand High / Scenario Future
  • Demand Low / Scenario SPOT
  • Demand Low / Scenario Future