Findings & "What-if"

i) Findings:

1. **Customer Segmentation:** Our analysis has segmented customers into four groups based on their predicted Customer Lifetime Value (CLV):
   - Champions: Highest CLV, averaging $104.78
   - Loyal Customers: Second-highest CLV, averaging $42.13
   - Need Attention: Third-highest CLV, averaging $28.96
   - Hibernating: Lowest CLV, averaging $19.63
2. **Purchase Frequency:**
   - Champions make the most frequent purchases, averaging 12.14 transactions
   - Hibernating customers have the lowest frequency at 2.89 transactions
3. **Monetary Value:**
   - Champions spend the most per transaction, averaging $565.48
   - Hibernating customers spend the least, averaging $184.46 per transaction
4. **Recency and Customer Age (T):**
   - Interestingly, Champions have the highest average recency (265.47 days) but not the highest T (279.50 days)
   - Loyal Customers have the lowest average recency (224.20 days) and T (255.14 days)
5. **Predicted Purchases:**
   - Champions are expected to make 0.22 purchases in the next 6 months
   - Hibernating customers are predicted to make only 0.07 purchases

ii) What-if Scenarios:

- What if we could move 10% of Hibernating customers to the Need Attention segment? This could potentially increase overall CLV by (28.96 - 19.63) * (0.1 * number of Hibernating customers)
- What if we focused on increasing the purchase frequency of Loyal Customers by 20%? This could potentially elevate many of them to the Champions segment, significantly boosting overall CLV

Interpretation: The wide gap in CLV between Champions and other segments suggests there's significant potential for value increase in the lower segments. The high recency for Champions indicates they may be at risk of churning, despite their high value. The low predicted purchases across all segments in the next 6 months suggests a need for strategies to increase engagement and purchase frequency.

Strategic Recommendations

1. **Enhance Champions Retention:**
   - Action: Implement a VIP program for Champions
   - How: Offer exclusive products, early access to sales, and personalized services
   - Who: Marketing and Customer Service teams
   - Where: Across all channels (online, in-store, mobile app)
   - When: Launch within 1 month, ongoing program
2. **Reactivate Hibernating Customers:**
   - Action: Create a "Welcome Back" campaign
   - How: Send personalized emails with special offers based on past purchase history
   - Who: Marketing team
   - Where: Email, retargeting ads
   - When: Start immediately, run for 3 months
3. **Boost Loyal Customers:**
   - Action: Develop a tiered loyalty program
   - How: Offer increasing benefits (free shipping, discounts) as customers move up tiers
   - Who: Marketing and IT teams
   - Where: Integrated across all purchase platforms
   - When: Design and implement within 3 months
4. **Address "Need Attention" Segment:**
   - Action: Launch a "Frequently Purchased Together" recommendation engine
   - How: Analyze purchase patterns and suggest complementary products
   - Who: Data Science and IT teams
   - Where: Website, mobile app, and email communications
   - When: Develop over 2 months, test for 1 month, then full implementation
5. **Increase Purchase Frequency:**
   - Action: Implement a "Monthly Must-Haves" campaign
   - How: Curate a selection of seasonal or trending products each month
   - Who: Merchandising and Marketing teams
   - Where: Dedicated email, homepage banner, social media
   - When: Start next month, run indefinitely with monthly themes
6. **Enhance Customer Experience:**
   - Action: Introduce a customer feedback loop
   - How: Send post-purchase surveys, conduct quarterly focus groups
   - Who: Customer Service and Product Development teams
   - Where: Email for surveys, in-person or virtual for focus groups
   - When: Implement surveys immediately, start focus groups next quarter
7. **Personalization Strategy:**
   - Action: Develop AI-driven personalized product recommendations
   - How: Use machine learning to analyze customer behavior and predict preferences

- Who: Data Science and IT teams
- Where: Website, mobile app, and email communications
- When: 6-month project: 3 months for development, 1 month for testing, 2 months for gradual rollout

These strategies aim to increase CLV across all segments by focusing on retention, reactivation, and increasing purchase frequency and value. Regular monitoring and adjustment of these strategies will be crucial for long-term success.