Appendix

Figure 1: Financial Ratios of Country's Best and Casey's General
(Source: Casey's Annual Report 2016)

Financial Analysis					
Companies		**Country's Best**		**Casey's General**	
	Financial Ratio	**2016**	**2015**	**2016**	**2015**
Asset Management	Days' sales in inventory	13.58	11.38	13.58	11.38
	Days' sales in receivables	1.42	1.06	1.42	1.06
	Assets Turnover	2.61	3.16	2.61	3.14
Profitability Measures	Profit Margin	3.16%	2.32%	3.17%	2.33%
	Return on Assets (ROA)	8.25%	7.34%	8.29%	7.31%
	Return on Equity (ROE)	22.02%	21.84%	20.86%	20.64%

Figure 2: SWOT Analysis of Current Situation

Country's Best SWOT Analysis - Current Situation	
Strengths	- Small Town Strategy: - decrease competitiveness with national chain brands - generate traffic from locality - Promote a friendly, community-focused atmosphere in which shoppers feel appreciated - Provide competitive prices and services - Around 2,000 stores with more than 35,000 employees
Weaknesses	Gasoline, highly volatile in prices and commoditized, accounts for 60% of revenues
Opportunities	- Stores expansion plan throughout Midwest to southern region - Exposure to new target customers - Raise Awareness - Convenience stores industry shows a steady increase, accounting for more than one third (34.1%) of outlets
Threats	- Proposal on increasing minimum wages will increase operating cost - Possible increase of fuel costs - Credit card fees - Expansion of bigger stores to small town areas

Figure 3: Country's Best Cost Breakdown

Country's Best Percentage of Monthly Costs per Store Breakdown				
	Tier 1	**Tier 2**	**Tier 3**	**Average Cost**
Cost per store (excluding labor costs and fuel)	13.33%	12.10%	10.20%	11.88%
Labor costs	8.89%	8.60%	8.16%	8.55%
COGS (excluding fuel)	11.11%	12.10%	13.61%	12.27%
COGS for fuel	66.67%	67.20%	68.03%	67.30%
Total	100.00%	100.00%	100.00%	100.00%

Figure 4: Average Casey's Consumer Income
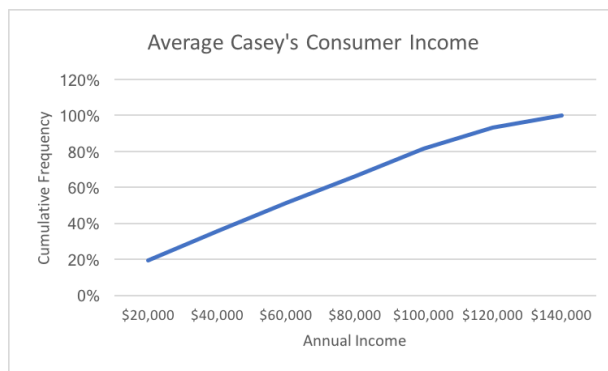
Figure 5: Procedure to Normalize the Spread of Customer Purchases

We used Infoscout's data for Casey's General Store basket size distribution (figure on left) and average consumer purchase to find the standard deviation of the normalized distribution. Then, we converted the standard deviation to purchase in dollars by multiplying it by the units-to-dollars average ratio to create the graph on the right.

Figure 6: Savings Projection from Credit Card Fee Recovery

Country's Best Financials (2016)		
Total Revenue	$	7,620,632,000
Cost of Goods Sold	$	5,894,250,000
Gross Profit	$	1,726,382,000
Total Revenue	$	7,620,632,000
40% of Total Revenue - Food Goods	$	3,048,252,800
50% of Sales - Credit	$	1,524,126,400
6.5% of Credit Sales - Under $5	$	99,068,216
Including Credit Card Fees (2.75%)	$	101,792,592
Deduction in CGS	$	2,724,376
Total Revenue	$	7,620,632,000
Cost of Goods Sold	$	5,891,525,624
Gross Profit	$	1,729,106,376
Change in Gross Profit	$	2,724,376

Taking 40% of the total revenue from 2016 accounts for the non-fuel goods sold. From our findings that 50% of our customers use credit cards for purchases, we can assume that at least 50% of these sales are by credit. Taking the 6.5% of credit sales that we found to be under $5, we added the 2.75% in credit card fees associated with this revenue. Thus, the difference between the revenue and revenue plus credit fees equals the deduction in CGS when these costs are recovered. This deduction in CGS directly translates to a positive increase in gross profit of $2,724,376.
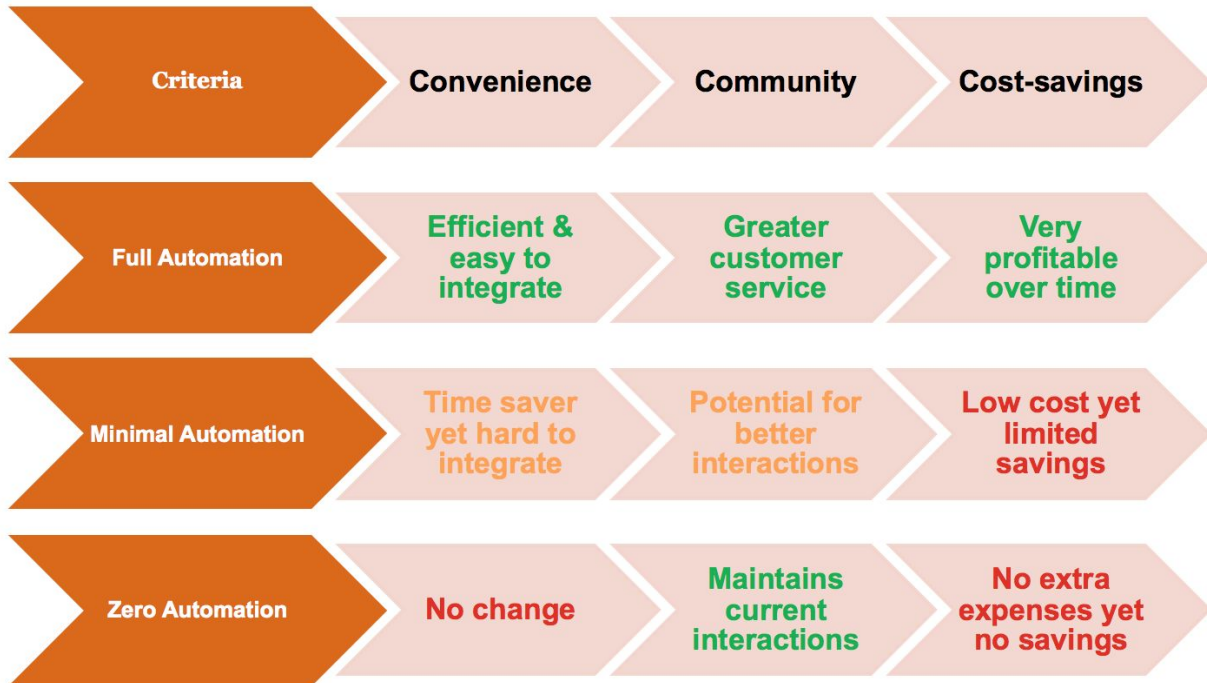
Figure 7: Evaluation of Three Automation Options

Criteria	Convenience	Community	Cost-savings
Full Automation	Efficient & easy to integrate	Greater customer service	Very profitable over time
Minimal Automation	Time saver yet hard to integrate	Potential for better interactions	Low cost yet limited savings
Zero Automation	No change	Maintains current interactions	No extra expenses yet no savings

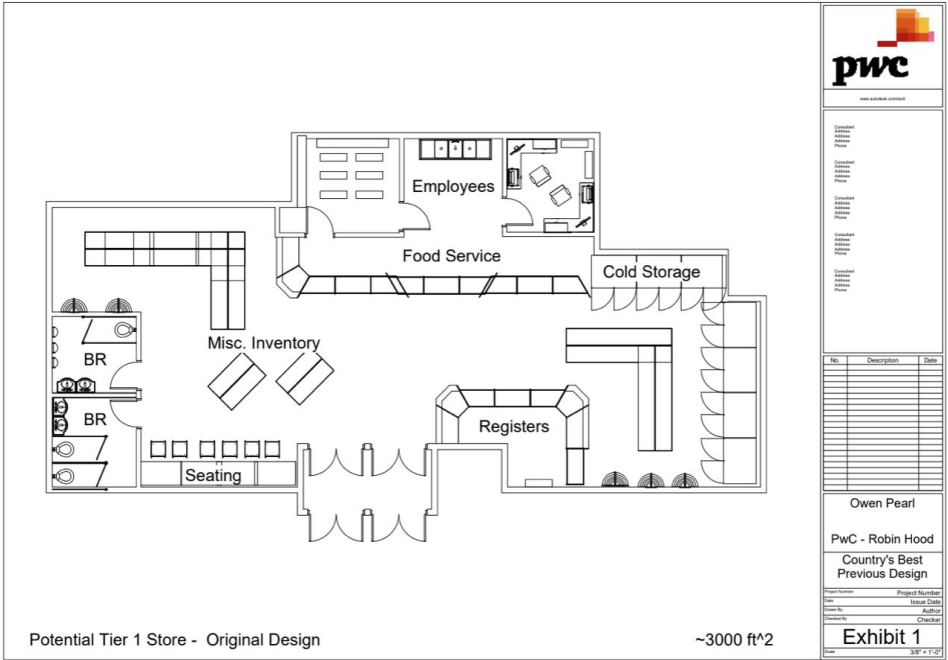**Figure 8**: Original Design of Country's Best Tier 1 Store

Figure 9: Innovated Design of Country's Best Tier 1 Store

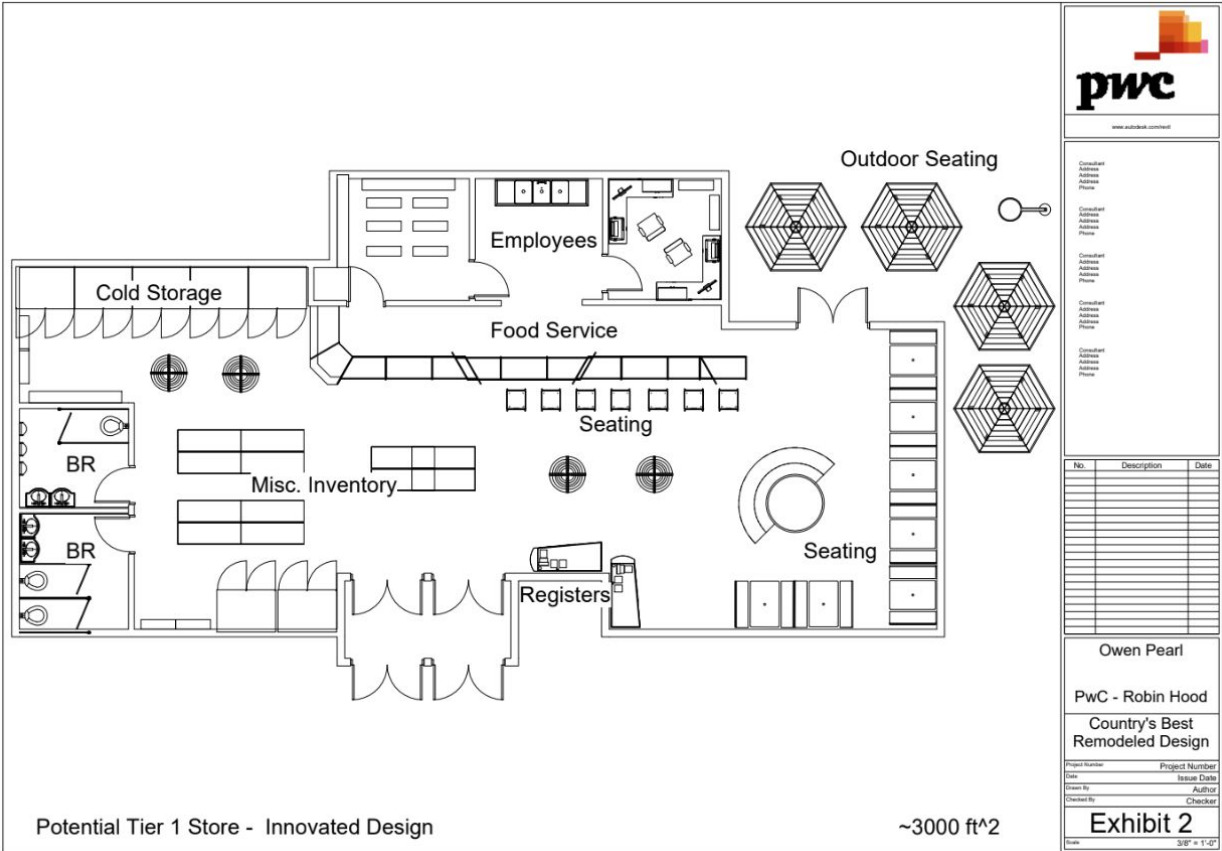**Figure 10**: Additional Net Income from Country's Best Construction (Years 1-7)

2016 Net Income	$ 240,736,000
Current Number of Stores	1,954
Average Net Income Per Store	$ 123,202
Number of New Stores Per Year	$ 57
Projected Increase in Net Income Per Year	$ 7,022,493

Figure 11: No Automation Projection

Year	2018	2019	2020	2021	2022	2023	2024
Consistent Net Incom	$ 247,000,000	$ 254,000,000	$ 261,000,000	$ 268,000,000	$ 275,000,000	$ 282,000,000	$ 289,000,000
Construction	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)
NPV	$ 179,070,796	$ 185,668,142	$ 192,265,487	$ 198,862,832	$ 205,460,177	$ 212,057,522	$ 218,654,867
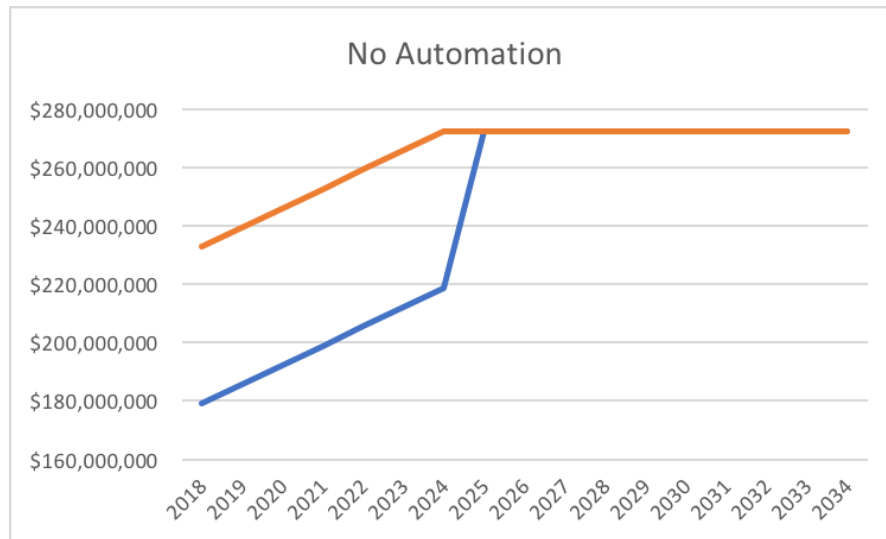
The table shows the net income projection for the first seven years. The consistent net income is based off of the increase of net income from new stores built. Construction takes into account the cost to build these new stores. Graphically, the net present value is depicted. The orange line represents the consistent net income; the blue line represents the no automation projection. After 2025, the net income levels off at $272,376,106.
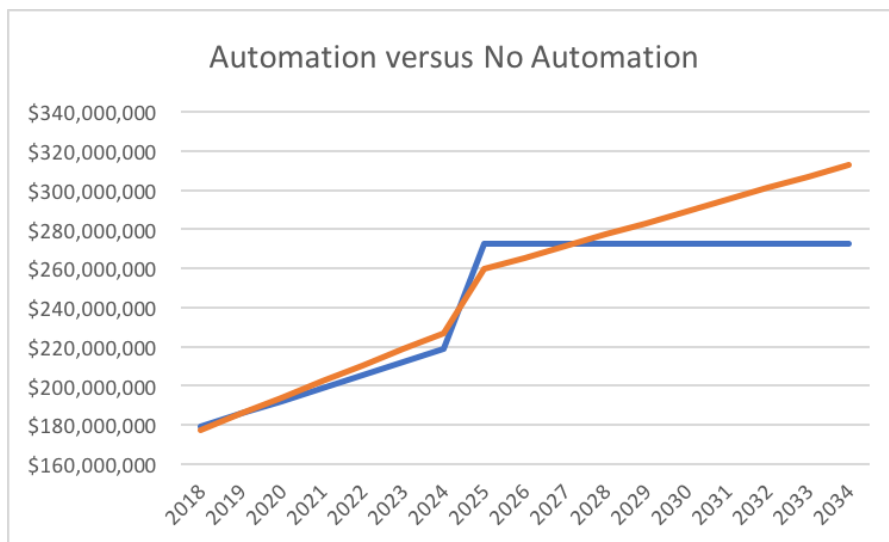
Figure 12: Automation Projection

Year	2018	2019	2020	2021	2022	2023	2024
Net Income	$ 247,000,000	$ 254,000,000	$ 261,000,000	$ 268,000,000	$ 275,000,000	$ 282,000,000	$ 289,000,000
Machine	$ (3,562,500)	$ (3,562,500)	$ (3,562,500)	$ (3,562,500)	$ (3,562,500)	$ (3,562,500)	$ (3,562,500)
Employee	$ 1,795,272	$ 3,590,544	$ 5,385,816	$ 7,181,088	$ 8,976,360	$ 10,771,632	$ 12,566,904
Construction	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)	$ (57,000,000)
NPV	$ 177,405,223	$ 185,694,572	$ 193,983,922	$ 202,273,271	$ 210,562,620	$ 218,851,970	$ 227,141,319

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Net Income	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000	$ 289,000,000
Machine	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)	$ (12,500,000)
Employee	$ 18,866,104	$ 25,165,304	$ 31,464,504	$ 37,763,704	$ 44,062,904	$ 50,362,104	$ 56,661,304	$ 62,960,504	$ 69,259,704	$ 75,558,904
Construction	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)	$ (20,000,000)
NPV	$ 259,526,461	$ 265,463,317	$ 271,400,174	$ 277,337,031	$ 283,273,887	$ 289,210,744	$ 295,147,601	$ 301,084,457	$ 307,021,314	$ 312,958,171

The first table shows the net income projection for the first seven years. Machine costs include the cost to install two self-checkout lanes per new store bought and employee savings include the cost associated with two-part time employees and two POS systems.

In the second table, machine and employee costs are associated with the remodeled operations of the old stores, and construction costs are the costs to renovate the old stores.

Figure 13: Automation Surpasses No Automation Net Income Projection

The orange line is the net income projection of the automation plan; the blue line is no automation. The cumulative difference in the years 2018-2024 is $23 million. Although the automation projected net income drops below the net income without automation, the innovations taking place in Country's Best stores will be sure to excite the country. By the completion of the automation project in 2034, the cumulative net income gain is $138 million.

Figure 14: SWOT Analysis after Implementation of Proposal

Country's Best SWOT Analysis - Implementation of Proposal	
Strengths	- Convenience: - Provide entertaining/relaxing hangout areas - Retain visiting time per customer - Community: - Propose a customer-oriented values with new modeling - Attract new customer segments - Cost-saving: - Reduce Labor Costs
Weaknesses	Unforeseen problems may arise if machines is improperly implemented
Opportunities	- Reconstruction generates differentiation between competitors - Customer attractiveness with Country's Best values - Move focus toward other potential profit-makers: - Online marketing platform 24-hour store formats - Pizza/hot foods delivery
Threats	Customer confusion and equipment issues

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