

- Robotics Case Study -

Financial Projections for a Food and Beverage Robotics Startup

*Financial Analysis for an Actual Business Case Study in the
proceeding slides*

Financial Projections

Key Assumptions

BASELINE INPUTS

Revenue Assumptions	Input
Average sales price (ASP)	\$8
Drinks per kiosk per day	100
Operating days per year	350
Gross margin	50%

Capex Assumptions	Input
Machine dev cost (first 2)	\$2,000,000
Unit cost (machines #3-1,000)	\$50,000
Depreciation in Years	10

Year	2025	2026	2027	2028	2029
Number of machines	2	4	14	114	1,114

Opex Assumptions	Input
Knowledge-worker headcount	15
Fully burdened Annual Rate	\$200,000
Office rent/Mo.	\$8,500
Misc. OpEx/Mo.	\$8,500

KEY OUTPUT MEASURES

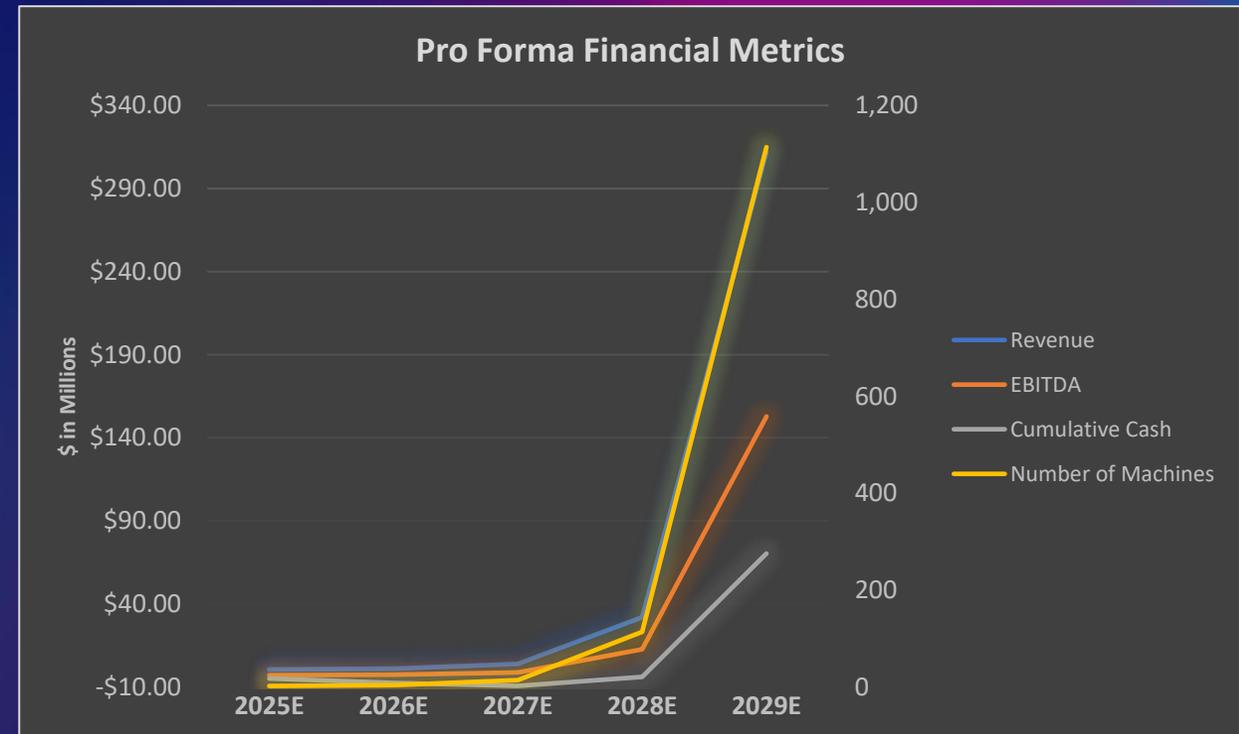
MEASURE	OUTPUT
Break Even Year	2028
Payback Period (Years)	3.05
Contribution Margin (Per Kiosk)	\$140,000
Ending Cash (YR 2029)	\$70,330,359

Financial Metrics

Key Metrics

	NUMBER OF MACHINES	CUMULATIVE CASH FLOW IN \$MM	EBITDA	NET REVENUE
2025	2	-\$4.91	-\$2.91	\$0.56
2026	4	-\$7.63	-\$2.63	\$1.12
2027	14	-\$9.34	-\$1.23	\$3.92
2028	114	-\$3.87	\$12.77	\$31.92
2029	1114	\$70.33	\$152.77	\$311.92

FINANCIAL METRICS BY YEAR

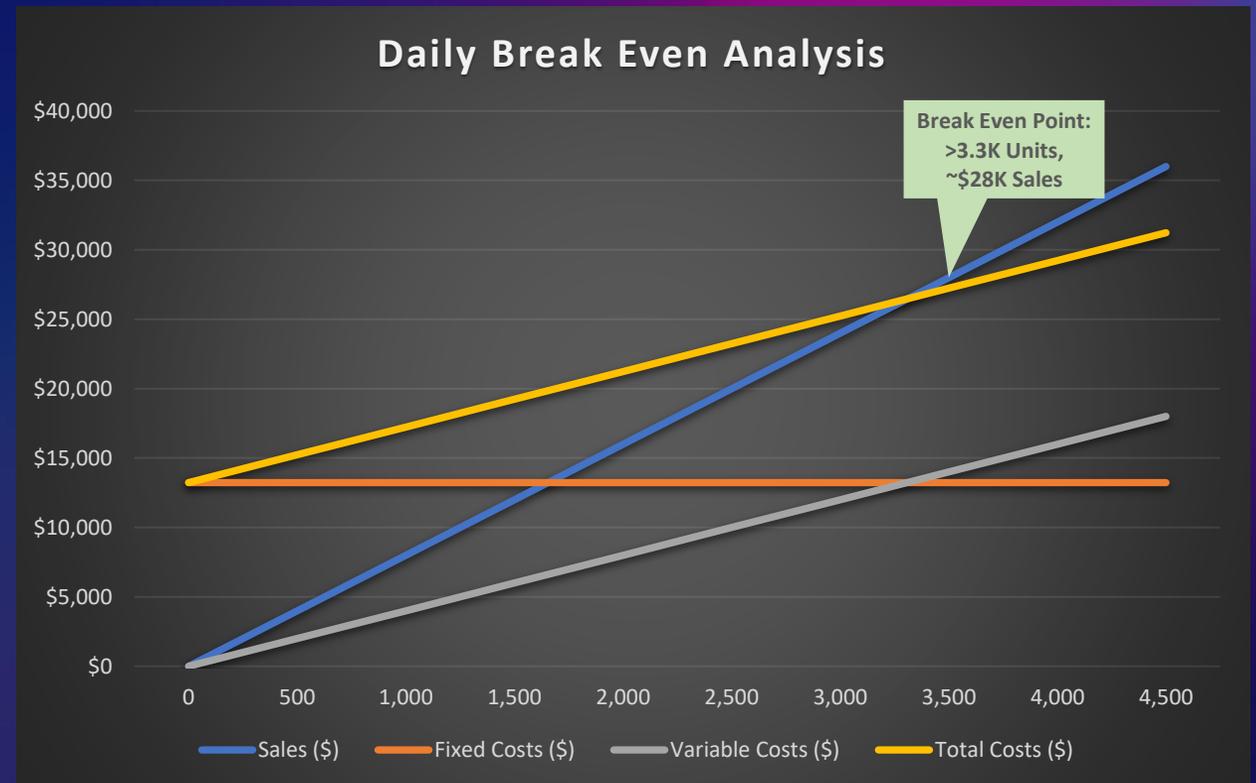


Break Even Analysis

Key B/E Assumptions

Operating Days/Year	350
Operating Days/Month	29.17
Fixed Costs/Day	\$13,229
Variable Cost Per Cup/Day	\$4
Sales Price Per Cup/Day	\$8

BREAK EVEN CHART



3K cup/day required to break even at total sales of \$27K/Day

Income Statement

Base Case	
\$ in Actual Figures	Drop Down
Choose Scenario ->	2
Adjusted ASP	\$8.0
Drinks Per Day	100
Gross Margin %	50%

<- Dynamic Income Statement Model allows you to toggle between Best, Base and Worst Case Scenarios

Base Case								P&L Unit Economics (Per Cup)					
\$ in Actual Figures	Drop Down	2025E	2026E	2027E	2028E	2029E	Total	2025E	2026E	2027E	2028E	2029E	Total
Number of Kiosks		2	4	14	114	1,114	1,248						
Number of Cups Sold		70,000	140,000	490,000	3,990,000	38,990,000	43,680,000						
Revenue													
Gross Revenue		560,000	1,120,000	3,920,000	31,920,000	311,920,000	349,440,000	8.0	8.0	8.0	8.0	8.0	8.0
Discounts		0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Net Revenue		560,000	1,120,000	3,920,000	31,920,000	311,920,000	349,440,000	8.0	8.0	8.0	8.0	8.0	8.0
Cost of Goods Sold (COGS)		(280,000)	(560,000)	(1,960,000)	(15,960,000)	(155,960,000)	(174,720,000)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)
Gross Profit		280,000	560,000	1,960,000	15,960,000	155,960,000	174,720,000	4.0	4.0	4.0	4.0	4.0	4.0
Gross Profit Margin %		50%	50%	50%	50%	50%	50%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Operating Expenses													
Payroll & Related		(3,000,000)	(3,000,000)	(3,000,000)	(3,000,000)	(3,000,000)	(15,000,000)	(42.9)	(21.4)	(6.1)	(0.8)	(0.1)	(0.34)
Rent		(96,000)	(96,000)	(96,000)	(96,000)	(96,000)	(480,000)	(1.4)	(0.7)	(0.2)	(0.0)	(0.0)	(0.01)
Misc. Opex		(96,000)	(96,000)	(96,000)	(96,000)	(96,000)	(480,000)	(1.4)	(0.7)	(0.2)	(0.0)	(0.0)	(0.01)
Total Opex		(3,192,000)	(3,192,000)	(3,192,000)	(3,192,000)	(3,192,000)	(15,960,000)	(45.6)	(22.8)	(6.5)	(0.8)	(0.1)	(0.37)
EBITDA		(2,912,000)	(2,632,000)	(1,232,000)	12,768,000	152,768,000	158,760,000	(41.6)	(18.8)	(2.5)	3.2	3.9	3.6
EBITDA Margin %		-520%	-235%	-31%	40%	49%	45%	-520%	-235%	-31%	40%	49%	45%
Depreciation & Amortization		(200,000)	(210,000)	(260,000)	(760,000)	(5,760,000)	(7,190,000)	(2.9)	(1.5)	(0.5)	(0.2)	(0.1)	(0.16)
EBIT		(3,112,005)	(2,842,002)	(1,492,000)	12,008,000	147,008,000	(7,190,000)	(44.5)	(20.3)	(3.0)	3.0	3.8	(0.2)
Interest Expense		0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
EBT		(3,112,005)	(2,842,002)	(1,492,000)	12,008,000	147,008,000	(7,190,000)	(44.5)	(20.3)	(3.0)	3.0	3.8	(0.2)
Taxes		0	0	0	(2,521,680)	(30,871,680)	(33,393,360)	0.0	0.0	0.0	(0.6)	(0.8)	(0.8)
Net Income		(3,112,005)	(2,842,002)	(1,492,000)	9,486,320	116,136,320	(40,583,360)	(44.5)	(20.3)	(3.0)	2.4	3.0	(0.9)
Net Income as % of Revenue		-556%	-254%	-38%	30%	37%	-12%	-556%	-254%	-38%	30%	37%	-12%

- At \$8 ASP/Cup and 100 Drinks Per Day at 50% GM we achieve a +Operating Margin (EBITDA) by 2028
- 10% increase to ASP, Drinks Per Day and GM drives an incremental \$58 in Operating Margin
- 10% decrease lowers Operating Margin by \$47MM

Backup Financials

Sensitivity Analysis – GM & Cups Sold/Day

Profit/Day		Gross Margin %			
		40%	45%	50%	55%
Cups Per Day	2,500	-\$5,229	-\$4,229	-\$3,229	-\$2,229
	2,750	-\$4,429	-\$3,329	-\$2,229	-\$1,129
	3,000	-\$3,629	-\$2,429	-\$1,229	-\$29
	3,250	-\$2,829	-\$1,529	-\$229	\$1,071
	3,500	-\$2,029	-\$629	\$771	\$2,171
	3,750	-\$1,229	\$271	\$1,771	\$3,271

Key Callouts

- **3.3K** cups sold per day is required to fully recoup fixed and variable cost
- Payback Period of 3 Years on Total Investment

Payback Period Analysis

In \$MM					Interest Rate	
Year	Cashflow	Undiscounted Balance	PV of Cashflows	Discounted Balance	10%	
0	-\$4.9	-\$4.9	-\$4.9	-\$4.9		
1	-\$2.7	-\$7.6	-\$2.5	-\$7.4		
2	-\$1.7	-\$9.3	-\$1.4	-\$8.8		
3	\$5.5	-\$3.9	\$4.1	-\$4.7		
4	\$74.2	\$70.3	\$50.7	\$46.0		

		Break Even Year
Payback Period (Undiscounted)	3.05	2028
Payback Period (Discounted)	3.09	

Payback Period = Full years until recovery + (Unrecovered Cost at Start of Recovery Year/CF in Recovery Year)