Waste Wizard

Waste Wizard is a commercial waste management company with both collection and landfill disposal operations. This case focuses on the waste collection unit. Waste collection is an asset-intensive business, involving a large fleet of vehicles, and the success of the business relies on high levels of operational efficiency and asset utilization.

Anecdotal evidence suggests that the Waste Wizard collection unit contains a number of inefficiencies and opportunities for improvement, which may need to take place before the firm continues to scale. The challenge facing the management team is that many improvement opportunities require an upfront investment and they do not have a robust tool to quantify the financial benefits of making incremental improvements as an operational metric. The firm is preparing to scale over the next few years at an expected rate of 10% per year, and would like to test whether it is ready to scale, or whether it should postpone growth until significant improvements are made.

Background

Waste Wizard is a commercial (B2B) waste management company with both collection and landfill disposal operations. It had revenues of over $30 million last year. While waste management is a relatively commoditized business, Waste Wizard has managed to differentiate itself by being very responsive to its customers, picking waste, essentially, on demand. This case covers the collection unit only, which deploys a large fleet of vehicle assets to collect waste from over 20,000 commercial customers distributed over a wide geographical area. The main business process is simple. Each vehicle leaves a depot and drives a route that covers a number of customers. At each customer location the vehicle empties the customer's garbage bins into the back of the truck (an action referred to as a "lift"). Once the truck is full, it drives to a landfill location to be unloaded. Waste Wizard's customers are billed a fixed amount each time their garbage bin is emptied, with pricing based on the volume of the bin (in m^3). The collection unit incurs a cost at the landfill gate for the amount of refuse it unloads, with pricing based on the weight disposed (in tons). This volume / weight mismatch between revenue and cost represents a fundamental tension in Waste Wizard's finances that needs to be actively managed.

Analysis of Operating System

Waste Wizard's operating system is based on deploying a number of assets and processes, as outlined in the table below. The business is asset-intensive, and it involves a simple, commoditized product with limited opportunities for value-based differentiation. As a result, the business pursues a low-cost strategy and requires supporting strategic capabilities including maximizing asset utilization, minimizing cost-to-serve, and achieving economies of scale in indirect costs (fleet management, and corporate overheads). Because the business operates at thin margins, Waste Wizard has been reluctant to invest in new technologies unless a clear financial gain can be demonstrated, driven by growing the business and creating opportunities for scale economies to be captured.

In the analysis below, you should suggest a scalable growth plan. The plan should be based on the following two parts:

Part (1)
Assess the readiness of the firm to scale using the frameworks and tolls we discuss in class. Your response should address the following three aspects:

(a) Where: what's the right growth trajectory for the firm (assuming it can grow in different directions).
(b) When: what are the main metrics that are leading indicators to Waste Wizard's readiness to scale. If you don't think the firm is ready to scale, please make suggestions as to what actions it should be required to take before it scales.
(c) At what pace should the firm scale? What is the key tradeoff?

Part (2)
Assuming that given the current sales and marketing effort (which is part of SG&A) the firm is going to grow its customer base by 10% per year over the next 5 years. However, based on the past, this is highly uncertain and depends on the regulation in the city and the competition. Thus, the demand, in tons is going to either grow by 15% per year with 1/3 probability, 10% per year with 1/3 probability, and 5% per year with 1/3 probability. For simplicity, assume that the firm needs to decide on how many trucks to add, now, and cannot add additional ones afterwards. Assume however, the firm can add truck drivers based on the actual demand. How many trucks shall the firm add (if at all)?

Create a short power point presentation summarizing your findings above. The deck should be up to 12 slides. You can also add an excel spreadsheet with your model.

Appendix 1: Income Statement

Income Statement

	FY
OPERATING REVENUE	**39,778,917**
Labour and Subcontractors	**5,988,550**
Disposal	**6,485,195**
Other Operating Costs	**11,788,263**
Selling, General & Admin Exp	**2,540,440**
Other Income & Expense	**- 320,642**
Management Fees	**1,536,075**
Non recurring items	**-**
EBITDA	**11,761,036**
Depreciation	**4,685,376**
Intangibles Amortisation	**79,591**
EBIT	**6,996,070**
Landfill Time Adj	**- 80,826**
Interest Intercompany	**- 1,357,111**
Interest Expense	**157,928**
Interest Income	**- 13,328**
Equity Earnings	**- 579,288**
FX Adjustments & Dividends	**- 23**
PRETAX	**8,868,714**
Taxation	**1,862,430**
NPAT	**7,006,285**

Implied effective tax rate 21.0%

Appendix 2: Balance Sheet

Balance sheet

		FY ($000)
ASSETS		
	Current Assets	
	Cash	10
	Accounts Receivable	3,022
	Bad Debts Provision	- 23
	Properties Intended For Sale	-
	Other Receivables	158
	Prepayments	88
	Inventory	36
	Contract costs incurred	-
	Financial Instruments	-
	Short Term Investments	-
	TOTAL CURRENT ASSETS	3,290
	Fixed Assets at Cost	25,284
	Depreciation	- 13,039
	TOTAL FIXED ASSETS	12,245
	Of which Fleet	*2,932*
	Of which Plant & Equipment	*6,158*
	Of which other	*3,153*
	Investment in Subsidiaries	-
	Investment in Associates	-
	TOTAL INVESTMENTS	-
	Goodwill at Cost	15,710
	Amortisation	- 4,924
	GOODWILL	10,786
	Deferred Expenses	-
	Other long Term Assets	-
	Future income tax benefit	-
	OTHER ASSETS	-
TOTAL ASSETS		**26,312**

LIABILITIES		
	Current Liabilities	
	Trade Payables	1,279
	Accruals	376
	Accrued Income Tax	-
	Deferred Income	2,067
	Financial Instruments	-
	TOTAL CURRENT LIABILITIES	3,720
	DEFERRED TAX	-
	POST CLOSURE COSTS	-
	TERM DEBT	1,201
TOTAL LIABILITIES (excl debt)		**4,921**
EQUITY		
	Retained Earnings	55,880
	Reserves	-
	Intercompany	- 34,489
TOTAL EQUITY		**21,390**
Total Liabilities & Equity		**26,312**

Appendix 3: Additional Operational Data

Producutivity metrics	
Average # trucks	78
Total # of Lifts	375,528
Total m3 collected	1,078,787
Average KM travelled per truck per year	42,971
Total Tonnes disposed	97,928
Total working days per year	330
# customers	22,519
Average waste density before compacting (tonnes / m3)	0.091

Truck metrics	
Average truck capacity (m3 per truck)	45
Average truck fuel economy (KM per Litre)	1.19
Average fuel cost per L	$1.95
Average repairs & maintenance cost / truck / year	$27,764

Labour metrics	
Truck driver labour cost per hour	$15.21
Hours per shift	10

Appendix 4:
Evaluation Rubric:

Readiness:

Qualitative discussion of the different aspects of the "Scaling Litmus Test" (20 points)

Well-built ROIC tree that delves into several aspects in sufficient details, linking to operational and marketing metrics (20 points)

Thorough discussion of the main scalability drivers and demonstrating how these are demonstrated by KPI's (20 points)

Growth plan:

Well-built model to study the scaling decisions (20 points)

Discussion of the main trade-offs (10)

Overall
Discussion of the main assumptions and their impact on your recommendations (10 points)