



Smith Material's Path Forward for Ready-Mix

5th April 2024

ALVAREZ & MARSAL



Texas A&M Case Competition



Meet the team



Daniel Fu

Class of 2026
BBA Finance
danielfu@tamu.edu



Gaurav Ganesh

Class of 2026
BBA Finance
guava@tamu.edu



David Rabalais

Class of 2025
BBA Finance
rabaldavs@tamu.edu



Ishaan Shanbhag

Class of 2026
BBA Finance
ishaanshanbhag@tamu.edu

- I. Industry and business overview
- II. Sales strategy
- III. Sales organizational structure
- IV. Delivery fleet strategy
- V. Optionality
- VI. Strategy shift
- VII. Path to achievement
- VIII. Managing impact of change
- IX. Summary

While the Ready-Mix business' pricing has recently corrected dramatically, recent quarry acquisitions position the division for future production cost advantages

Austin Ready-Mix market overview

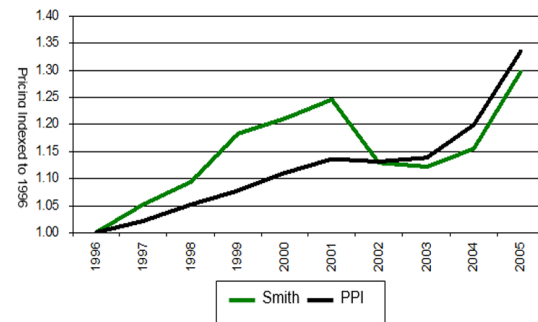
Recently...

- Larger players focused on big projects
- Several small competitors moved into the market
- Industry shrunk due to 9/11 and technology recession

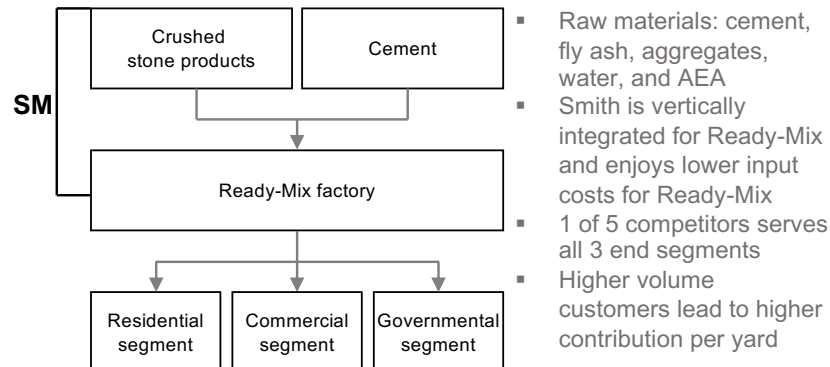
Outlook

- Sales pricing increasing as Austin economy recovers
- Consolidation due to market fragmentation
- Migration inflow to the area will serve as future tailwind

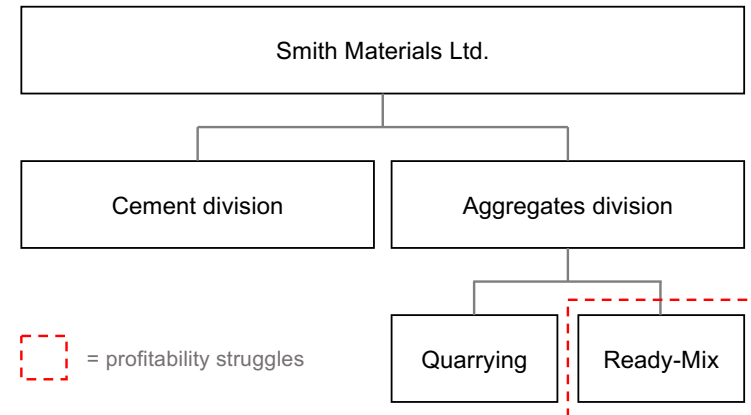
Figure 3: Historical Ready Mix Pricing vs. PPI for Ready Mix Concrete



Ready-Mix value chain



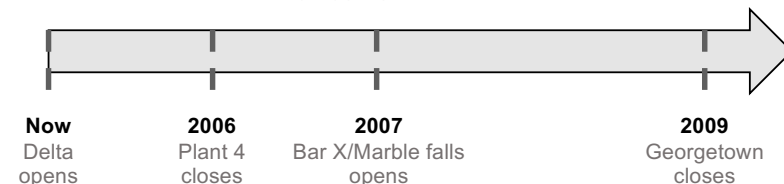
Smith Materials corporate overview



- Cement division produces 1M tons annually
- Quarrying produces ~5.5M tons of crushed rocks
- Ready-Mix uses Smith's cement and quarries
- Forced to buy back market share due to focus on larger projects in the early 2000s

Smith Materials' timeline

- Historically, low management support for the business line due to 60% focus on hot-mix unit (now divested) and 40% on Ready-Mix
- Recently acquired reserve deposits Marble Falls, Bar X, and Delta
- \$50M investment over next 2 years to build Marble Falls and Bar X
- Expected to have significant production cost advantages over others
- Current quarries producing aggregates will soon in 2006 and 2009



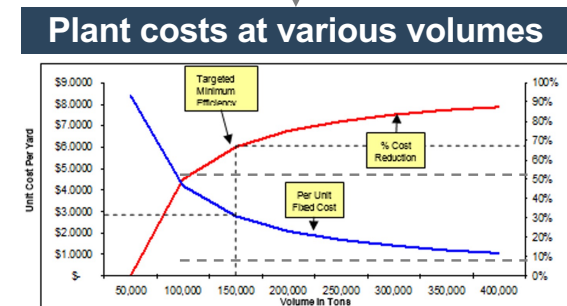
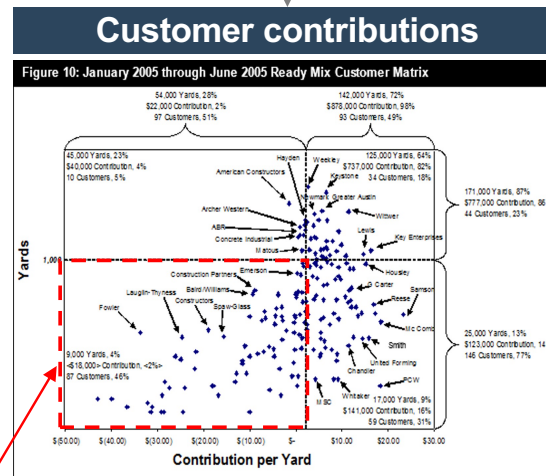
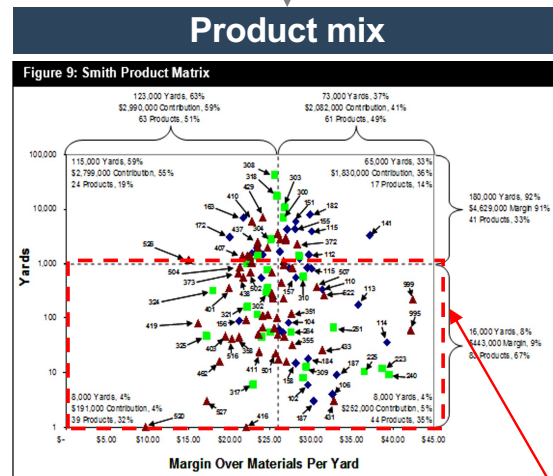
1000



Leasing trucks

Quick fixes include reducing product mix portfolio by 50%, divesting customers with negative contributions, and reaching targeted minimum efficiency for production

$$\text{Sales price} - \text{Variable costs} = \text{Contribution margin} - \text{Fixed costs} = \text{Profits}$$



- Only main plant at targeted minimum efficiency
- Based on hourly production, Georgetown plant can increase production volume by ~50K¹
- Only way for other plants to reach 150K volume is to have increased sales

Product Mix	Top left	Top right	Bottom left	Bottom right	Top half	Bottom half
Contribution	\$ 2,799,000	\$ 1,830,000	\$ 191,000	\$ 252,000	\$ 4,629,000	\$ 443,000
Yards	115,000	65,000	8,000	8,000	180,000	16,000
Products	24	17	39	44	41	83
Contribution/yard	\$ 24.34	\$ 28.15	\$ 23.88	\$ 31.50	\$ 25.72	\$ 27.69
Contribution/product	\$ 116,625	\$ 107,647	\$ 4,897	\$ 5,727	\$ 112,902	\$ 5,337

- Number of mixes in product portfolio needs to be reduced by 50% to be optimized
- Margin over material = Total costs – materials
- Divest the bottom 83 mixes that only produces 8% of total yardage and 9% of total contribution
- Could increase margin by divesting top left but that would significantly lower production
- Decreases contribution per yard by \$0.16**

Customer mix	Top left	Top right	Bottom left	Bottom right	Left half	Right half
Contribution	\$ 40,000	\$ 777,000	\$ (18,000)	\$ 123,000	\$ 22,000	\$ 878,000
Yards	45,000	125,000	9,000	17,000	54,000	142,000
Customers	10	44	87	146	97	93
Contribution/yard	\$ 0.89	\$ 6.22	\$ (2.00)	\$ 7.24	\$ 0.41	\$ 6.18
Contribution/customer	\$ 4,000	\$ 17,659	\$ (207)	\$ 842	\$ 227	\$ 9,441

- Less than 25% of customers purchase 90% of total ready-mix volume produced
- Could also divest top left segment to maximize contribution per yard but loses 45K volume
- 45K volume needed to realize fixed-cost savings
- Increases contribution per yard by \$0.09**

Smith Materials should make operational changes to raw materials used in production and in the sales division to create cost savings

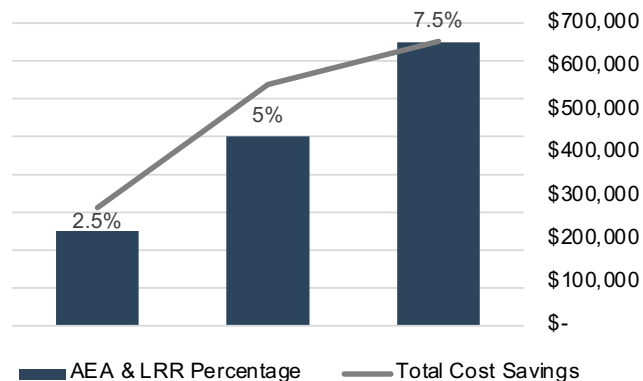
$$\text{Sales price} - \text{Variable costs} = \text{Contribution margin} - \text{Fixed costs} = \text{Profits}$$

Material usage and costs

Average Material Costs		
Component	Cost Per Yard of Concrete	Units
Cement	\$ 16.56	368
AEA(oz)	\$ 0.030	2.10
Mid/Low Range(oz)	\$ 0.47	16.90

- Compressive strength of concrete = $\frac{1}{\text{water cement ratio}}$
- AEA: Concrete is air entrained containing 4-8% entrained air
- M/L Range Reducer: Reduces water needed in mix by ~7.5%
- Overall reducing cement usage by ~13.5%

Potential cost savings

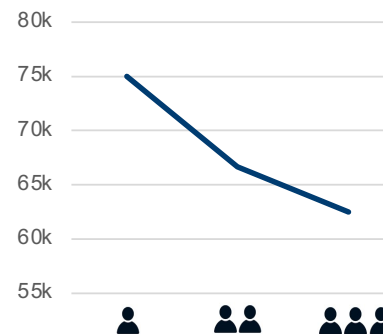


AEA & LRR %



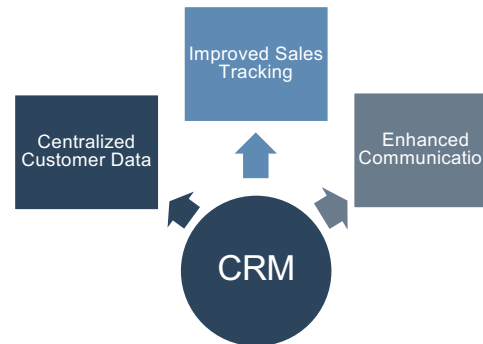
Total Cost Savings

Sales inefficiencies



- Currently: 1 person per ~75,000 yards
- Yards per person decreases on margin
- Typical ready mix organizations staff one salesmen per 100,000 yards
- Enables capable salespeople to assist the aggregates business

Efficiency through CRM



- Streamlined sales processes through a CRM
- Decreases reliance on individual contributors
- Enables capable salespeople to assist the aggregates business

Employees	5	10	15
Estimated Cost (Monthly)	\$350	\$700	\$1,050

Beyond the quick fixes, Smith Materials can optimize the operational efficiency of trucking and reduce associated driver costs

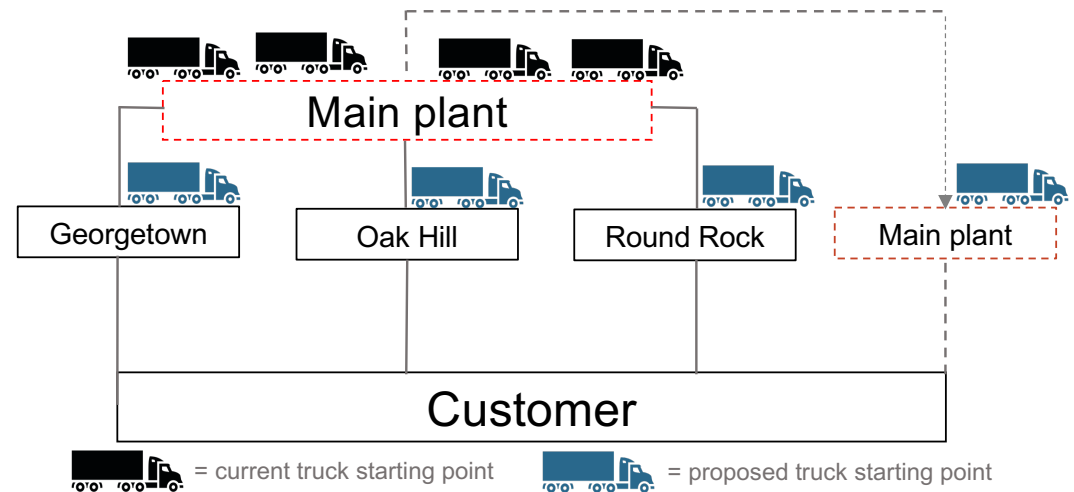
$$\text{Sales price} - \text{Variable costs} = \text{Contribution margin} - \text{Fixed costs} = \text{Profits}$$

Truck distribution

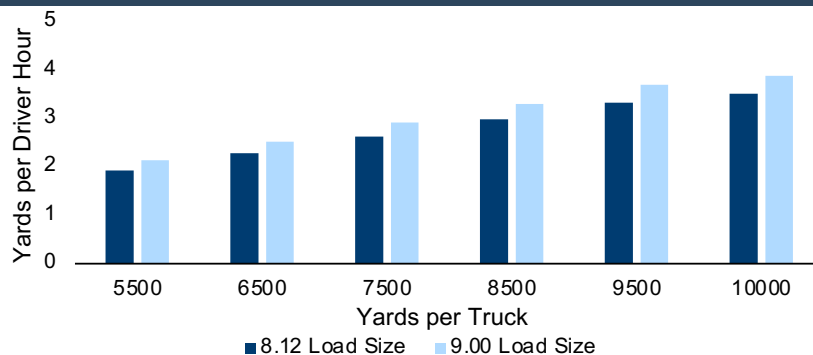
Plants	Current	YPT	Suggested	YPT
Georgetown	0	0	8	9795
Oak Hill	0	0	8	9795
Round Rock	0	0	4	9795
Main Plant	57	6250	18 + 5	9795
Total	57		44	

Current average trip time of 120 minutes

Possible average trip time of 89 minutes

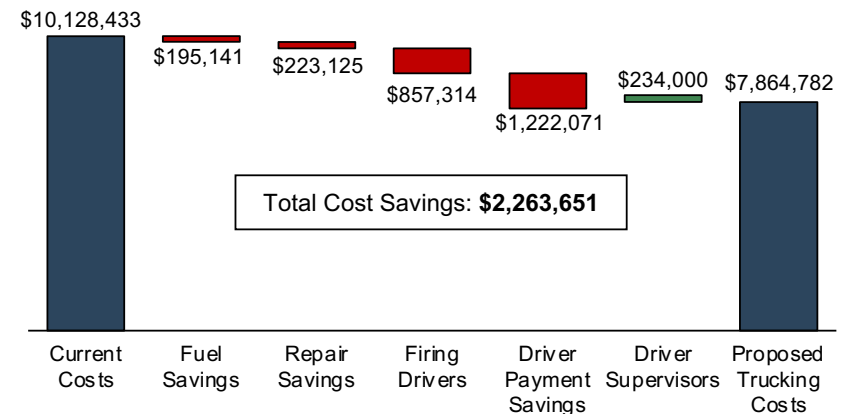


Improving load size capacity



With the new capacity for yards per driver hour increasing to 4.5, there is potential to utilize larger loads to save driver and fuel costs.

Appropriating driver salaries



After implementing proposed quick fixes and operational changes, management will still have the option to keep the Ready-Mix business or divest

Keep the business because great turnaround

- We believe we can attribute the recent decline of the ready-mix business to management's lack of focus between the ready-mix and hot-mix segments
- With many easy to implement solutions, we can see a very quick turnaround in terms of cost prevention and profitability
- By changing the composition of our concrete to include a greater amount of AEA, we are confident that Smith can save at least \$500,000 given we see volume retain historical levels
- Having trucks distributed across each plant is also standard across the industry making it a proven solution
- One of the major risks we identified that could prevent Smith from making a turn back to profitability is the event of a large economic downturn.
- This can disrupt construction deal flows and continue to keep the price of raw material inputs significantly higher than Smith's profitability

Divesture if turnaround fails

- In the case that the business is still not profitable, we suggest Smith to divest the ready-mix segment to a competitor
- Due to the highly fragmented nature of the industry, we believe this won't be too hard of a task as the industry will slowly consolidate over time
- In the event of this happening, we suggest Smith to begin seeking out external interest in the segment
- Smith should aim to sell the segment at the very least, an industry average of a 3.6x EBITDA multiple or 0.7x revenue multiple

Smith Materials will have the option to take a new strategic viewpoint in the industry by emphasizing growth in less competitive locations

Competitor segmentation

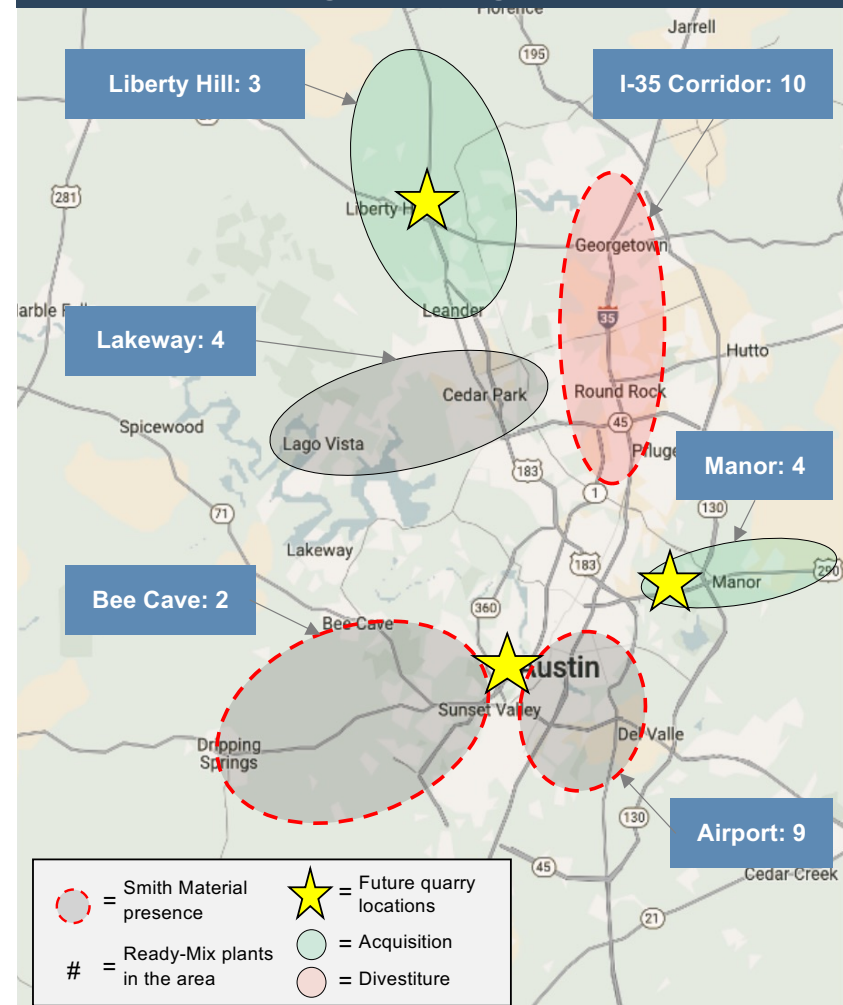
	Residential	Commercial	Governmental
1. Bastrop			
2. Utley Concrete			
3. Watson Supplies			
4. Gonzales			
5. Smith Materials			
1. Iron Horse			
2. Lane			
3. Texmix			
4. Texas Concrete			
Potential acquisition targets			
▪ In areas near future quarries			
▪ Less players in the space leads to higher pricing power for Smith			
1. ABC			
2. Alpha			
3. Lone Star			
4. Iron Horse			
5. Yarrington			
6. Ingram			

Strategic shift rationale

Recommendation: Divestiture of entire I-35 Corridor Segment

- With Georgetown quarry running dry soon, production costs will increase
- Shifting would reduce transportation costs as the quarry material can easily be loaded into the ready-mix plants without delivery fleets
- By shifting to operating only plants near a quarry, Smith can minimize their material costs ensuring a higher contribution margin
- We suggest this shift be supplemented with acquisitions of smaller plants near our new quarries in locations with limited players
- This will ensure Smith can retain a higher pricing power and retain high margins
- It is worth noting that although our decision to keep the Bee Cave plant is branching off to the stand-alone plants, we believe it is offset by their high pricing power with only other player in the segment.

Geographic segments



Implementing all of the recommended solutions will occur in four distinct phases, and the total cost savings equate to ~\$2.3M

Phase 1

Ready-mix Production with AEA

- Purchase an increased amount of AEA and LRR
- Increase AEA and LRR usage within all production plants
- Establish standard across plants noting optimal usage of 6% AEA and 7.5% LRR
- Cost savings of up to \$531,377 annually by increasing AEA and LRR dosage

Phase 2

Introduce Sales Solutions - CRM

- Evaluate CRM options based on budget and features
- Migrate existing customer data into the new CRM
- Organize training sessions to help your team understand the *why* behind the CRM
- Integrate CRM within existing business tools to measure progress towards goals and identify areas for improvement

Phase 3

Maximize Trucking Efficiency

- Allocate ready-mix trucks to plants based on volume
- Hire driver supervisors at each plant to ensure smooth operations
- Establish distinguished storage places at each plant for ready-mix trucks
- Keep 5 trucks stored at the main plant for use in case of emergency
- Find a buyer for the 13 trucks Smith Materials no longer needs

Phase 4

Acquisition and Divestures of Struggling Plants

- With the current state of the industry many plants will be struggling
- Using cash flows or other financing methods, Smith Materials should look into the acquisitions of ABC, Alpha, Lone Star, and Iron Horse for their plants in residential and airport segments
- Depending on successful acquisitions and landscape within each segment, Smith Materials should utilize their pricing power to raise margins in favorable segments
- Smith should additionally begin looking for buyers for their I-35 plants

AEA Savings: \$563,068

- Increased usage of AEA by 5.5% per ton
- Increased usage of LRR by 2.9% per ton
- Reduced cement usage by an additional 8.4%, saving \$347,925 by AEA and \$183,452 by LRR

Truck Savings: \$2,263,651

- For not using the 13 trucks, Smith saves \$195,140 on fuel
- Smith additionally saves \$223,124 on repair costs for the trucks
- As these 13 trucks are being put up for sale, Smith no longer needs to pay for their drivers, saving \$857,314
- With the more efficient load sizes, Smith will save \$1,222,071 on driver salaries

Increased Production Savings: \$94,000

- Increased Georgetown plant production by 50,000 yards
- Saves \$1.97 per yard on fixed cost savings
- After decrease of margin contribution decreases overall savings to \$1.88
- Overall saves \$94,000 through total yardage

Timing

- **Phase 1:** Training employees for new mixes = **3 months**
- **Phase 2:** Implementation + training/integration = **2.5 months**
- **Phase 3:** Allocation/Hiring (1 month) + Finding buyer (8 months) = **9 months**
- **Phase 4:** Acquisition and divesture of plants = **Indefinite**

Projected impact on key stakeholders and how Alvarez & Marsal can assist Smith Materials to manage the impact of proposal recommendations

Customers

Insight

- Before fully deciding to discontinue sales to 87 customers with negative contribution margins, Smith should analyze their geographical location
- Determine the impact to local producing plant and determine if any of the customers have the potential for future profitability or value to Smith

How Alvarez & Marsal can help

- Once decided on which customers to discontinue sales with, the team will provide timelines, responsible parties, and checkpoints for running the transitioning process
- Analyze potential risks such as reputational damages and legal challenges due to contract requirements

Employees

Insight

- Smith should analyze the efficiency of the current employees in each role
- Identify which departments require a reduction in staff and pinpoint the top-performing employees within the cement and aggregates divisions.

How Alvarez & Marsal can help

- Reduce our sales team by terminating one member since our current yardage output does not necessitate such a large sales force.
- Integrate employees into CRM with sessions to teach efficient usage of the system
- After streamlining sales, possibly relocate high-performing salespeople from the cement division to the aggregates division

Suppliers

Insight

- Before divesting 2 of their major plants, Smith should understand that this will cause the loss of contracts for their suppliers.
- The Smith management team should consider communicating with the suppliers or negotiate for new terms for the contract.
- This will allow Smith to retain a strong, healthy relationship with suppliers in the event of any future events

How Alvarez & Marsal can help

- The team can conduct a supplier analysis to see who will be the greatest effected
- Conduct negotiation support and find the ideal term agreements between suppliers and Smith
- Provide both the supplier and Smith a market analysis to help them understand where to find other opportunities

Management

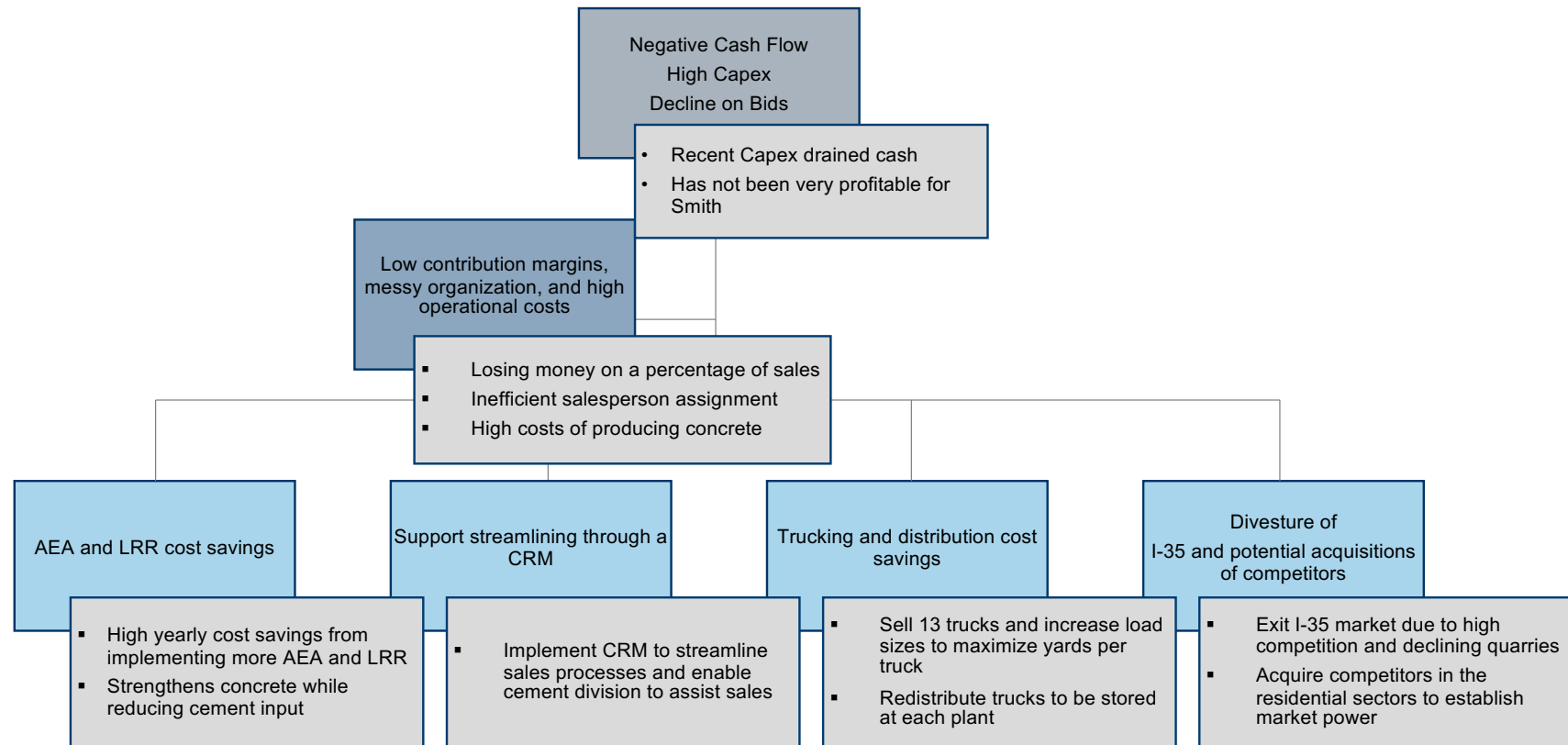
Insight

- Management should streamline their focus on the ready-mix segment, unlike previous years
- Reduced focus on other segments, appoint members to oversight

How Alvarez & Marsal can help

- Our team will help strategically advise with benchmarking within the management team, optimizing decision-making practices and structure
- Aid the management team in developing a clear vision and strategic goals as the company progresses through its solutions
- Develop a comprehensive management strategy plan to address potential resistances or challenges during the streamlining process

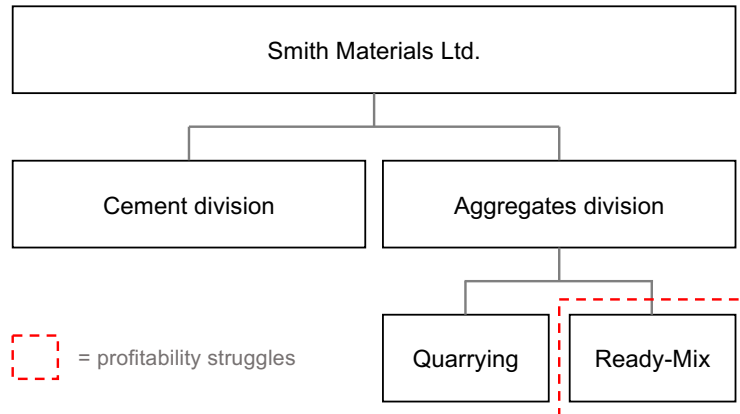
Summary



Appendix

Ready-Mix division is forecasted to gain significant production cost advantages due to vertical integration and expected quarrying openings...

Smith Materials Corporate Overview



- Currently using .05% of AEA in Ready-Mix Batches
- Based on AEA standard, can increase by an addition 5.5%
- Overall mix would contain 6% entrained air
- Cement reduction savings up to \$0.99 per yard
- Overall yearly savings (using 6% AEA) are \$368,248

- Cement division produces 1M tons annually
- Quarrying produces ~5.5M tons of crushed rocks
- Ready-Mix uses Smith's cement and quarries

- Average age of fleet: 3.5 years
 - Industry: 5 – 7 years
- Trucks can run for up to 20 years with maintenance
- Purchased at least 10 mixers per year for last 7 years

Depreciation life	Number of trucks	Rebuilds	Book value	Annual depreciation	Tax basis
0 months	22	0	\$ -	\$ -	
12 months	15	0	\$ 661,000	\$ 661,000	
24 months	0	7	\$ 80,000	\$ 40,000	
36 months	10	0	\$ 695,000	\$ 232,000	
48 months	0	0	\$ -	\$ -	
60 months	10	5	\$ 1,327,000	\$ 266,000	
Total	57	12	\$ 2,763,000	\$ 1,199,000	
Volume				382,000	

Recently...

- Larger players focused on big projects
- Several small competitors moved into the market
- Industry shrunk due to 9/11 and technology recession



Outlook

- Sales pricing increasing as Austin economy recovers
- Consolidation due to market fragmentation
- Migration inflow to the area will serve as future tailwind

Portfolio and customer optimizing for contribution margin

Product Mix	Top left	Top right	Bottom left	Bottom right	Top half	Bottom half	
Contribution	\$ 2,799,000	\$ 1,830,000	\$ 191,000	\$ 252,000	\$ 4,629,000	\$ 443,000	
Yards	115,000	65,000	8,000	8,000	180,000	16,000	
Products	24	17	39	44	41	83	
Contribution/yard	\$ 24.34	\$ 28.15	\$ 23.88	\$ 31.50	\$ 25.72	\$ 27.69	
Contribution/product	\$ 116,625	\$ 107,647	\$ 4,897	\$ 5,727	\$ 112,902	\$ 5,337	
196,000	0.586734694	0.331632653	0.040816327	0.040816327			% of yards
\$ 25.88	\$ 14.28	\$ 9.34	\$ 0.97	\$ 1.29	-	\$ -	% * contribution/yard
Current contribution/yard	\$ 25.88						
New contribution/yard	\$ 25.72						

	Top left	Top right	Bottom left	Bottom right	Left half	Right half	
Contribution	\$ 40,000	\$ 777,000	\$ (18,000)	\$ 123,000	\$ 22,000	\$ 878,000	
Yards	45,000	125,000	9,000	17,000	54,000	142,000	
Customers	10	44	87	146	97	93	
Contribution/yard	\$ 0.89	\$ 6.22	\$ (2.00)	\$ 7.24	\$ 0.41	\$ 6.18	
Contribution/customer	\$ 4,000	\$ 17,659	\$ (207)	\$ 842	\$ 227	\$ 9,441	
196,000	0.204081633	3.964285714	-0.091836735	0.62755102			% of yards
\$ 29.55	\$ 0.18	\$ 24.64	\$ 0.18	\$ 4.54			% * contribution/yard
Current contribution/yard	\$ 29.55						
New contribution/yard	\$ 6.18						

Production volume per plant asset

Figure 24: Current Plant Asset Book and Tax Value with Associated Annual Depreciation

Location	Plant	Volume	Book Value	Annual Depreciation	Tax Basis
Main	Appco	177,000	\$ 84,000	\$ 22,000	
Georgetown	Rex	82,000	\$ 9,000	\$ 9,000	
Round Rock	Plant Fabricators	82,000	\$ 81,000	\$ 15,000	
Oak Hill	Plant Fabricators	41,000	\$ 96,000	\$ 20,000	
Volente	Rex	-	\$ 59,000	\$ 1,000	
Total		382,000	331,000	67,000	-
Per Unit				\$ 0.18	

- Assuming Main is at max production volume of 177K (most likely not since other plant aren't)
- Main plant: 200 yards per hour
- Georgetown: 150 yards per hour (75%) -> $177K * 75\% = 132.75$
- Round rock/Oak Hill: 125 yards per hour (62.5%) -> $177K * 62.5\% = 110.6$

Material Cost Savings

AEA and LRR Cost Savings		
Component	Cost Per Yard of Concrete	Units
Cement	\$ 16.56	368
AEA(oz)	\$ 0.030	2.10
Mid/Low Range(oz)	\$ 0.47	16.90
	\$	
AEA Savings per Yard	0.99	
	\$	
Cost of AEA per yard	0.03	
	\$	
Cost of Mid/Low Range	0.47	
	\$	
M/L savings per yard	0.48	
	\$	
AEA Savings	379,708.00	
	\$	
M/L savings	183,360.00	
	\$	
	563,068.00	