WHEN EVENTS DO NOT TURN OUT AS EXPECTED: THE ACQUISITION OF ALL-OCCASION TEES INC.

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Pedro Martinez, Chief Operating Officer of C&S Investments, pushed back from his desk, looked away from his monitor, and sighed. The newest quarterly numbers for C&S' subsidiary, All-Occasion Tees, Inc. (AOT), were in front of him, and they told a story which was uncomfortably familiar. While there were some bright spots in AOT's recent performance, the company was still not profitable. The good news was too little and was coming too slowly. Pedro had decided that AOT's only option was to increase custom sales. He had a strategy in place but was not sure that it would generate the results that C&S hoped to obtain. He knew that the ownership group would continue to fund deficits in the near-term, and he believed in his long-term vision for the company. Ultimately, AOT needed to grow - or shut down - and it was running out of time.

The Acquisition

Pedro Martinez became aware of an opportunity to acquire All Occasion Tees, Inc. (AOT) in 2015. The company's owner was ready to retire and willing to sell the then 27-year-old Spartanburg, South Carolina, company. As Chief Operating Officer of C&S Investments, based in Honduras, Pedro saw an opportunity to extend operations to the United States and to provide expedited services to its U.S.-based customers. Because of client feedback, Pedro was confident that the acquisition would be profitable.

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C&S had been in advanced stages of discussion with two of its sports apparel customers to offer screen-printing and third-party logistics (3PL) services in the United States, services not offered by most small screen printers. These services included inventory management, warehousing, and order fulfillment. C&S Investments, a cut-and-sew family business in Honduras, finalized the $1.7 million deal in July 2016. Following the acquisition, C&S Investments sold AOT's building. Francisco Herrera, AOT's general manager and C&S Investments Finance and IT director who oversaw its operations, stated:

> *"Due to our 3PL plan, we decided to sell the property and rent a facility to incorporate 25,000 sq. ft. of warehouse space in the South Carolina facility. We reinvested the profits from the sale to help finance the upgrades needed in the rented space to fit our needs."*[1]

The square footage of the warehouse space was determined by the expected demand for 3PL services from the sport apparel companies. C&S invested approximately $1.9 million in plant and equipment during the 2017-2018 period.

3PL Services

With 3PL, garments were manufactured to a client's custom fit specifications in Honduras and shipped to South Carolina at the client's expense. The garments were warehoused in the facility until screen-printed and shipped per client instructions. This model was appealing to clients with quick response (hot market) needs where the screen-printed garments needed to be delivered within a narrow window, typically with a 24-hour turnaround time, and for those who needed made-to-order small printing runs in the range of 36 to 48 items for increased inventory management flexibility.[2] Thus, providing these services from Honduras was not feasible. AOT's expected revenue stream was from the screen-printing and 3PL operations. The

[1] The lease agreement was for a period of 5 years. At lease expiration, rent was likely to go up.

[2] The Major League Baseball Championship series is an example of a hot market as fans expect championship T-shirts immediately. The made-to-order business typically required small runs where a client's order comprised of small quantities of the same design printed in assorted color T-shirts and could be printed because they used the same ink colors. For example, a 36 T-shirt order, might call for the printing of 12 T-shirts in three distinct colors but with the same ink setup.

price per item for 3PL services was set at $1 per garment. With a screen-printing annual capacity of 2.25 million units, the revenue potential per year was $2.25 million.

Unexpected Events

As the facility neared completion at the end of 2017 and beginning of 2018, both clients informed C&S that circumstances had changed. In one instance, the Dallas Cowboys, who produced their own licensed sport team apparel, had decided to join the licensing agreement among the National Football League, Nike Inc, and Fanatics (Belson 2018). The other sport apparel client informed C&S that a strategic shift had occurred. The company had decided to shift its focus from sports league and team sponsorship to athlete sponsorships, removing the need for the 3PL service offered through AOT.

Reflecting on the events that transpired, Pedro stated,

> *"We have always been in a business where it is necessary to build the infrastructure before you can attract clients. This is because before a client agrees to sign a contract, we must pass a series of audits, such as environmental and labor audits that can take up to a year to complete. In many respects, we take on a lot of risk because we build with no guarantees that the clients will sign on. That is just the nature of our business."*

The Screen-Printing Industry

Apparel screen printing was the largest segment of the custom screen-printing industry (Rodriguez 2020). The sector generated approximately 50% of the industry's revenue.[3] Industry revenues grew by 9.14% from $8.644 billion in 2015 to $9.434 billion in 2019. By 2020, revenues were expected to decline to $7.7 billion or 18.38% due to the pandemic. Screen

[3] Apparel, stationery, and label screen printing were the principal industry sectors. Excluded from the custom screen-printing reports were manufacturing firms that used in-house screen printing to add their own designs. (Rodriguez 2020).

printing was regarded as a high-quality printing service due to the amount of ink that was transferred through mesh screens to create the desired designs.

Demand for screen printing came from consumers who sought customized products, businesses who needed promotional items for their branding efforts, and manufacturers who outsourced their screen-printing function. Economic activity affected the demand from businesses, consumers, and manufacturers. Purchases of custom print items were regarded as discretionary spending, influenced by the level of consumers' disposable income and corporate profits which influenced promotional and advertising budgets. Custom print sales were also considered seasonal, with the highest demand during the third and fourth quarter of each year that coincided with the back-to-school and holiday seasons (Rodriguez 2020).

Industry profitability, measured as earnings before interest and taxes (EBIT) was 4.7% of revenues in 2015 and remained above 4.2% through 2019.[4] By 2020, profitability was expected to decline to 1.4% of revenue. Profit pressures were driven by the competitive nature of the screen-printing industry and the industry's labor-intensive nature. Due to the lack of a high degree of product differentiation among screen printers, screen-printing companies competed on price, which resulted in downward pressure on prices and profit margins. Labor costs fluctuated between 25% and 27% of revenues over the 5-year period starting in 2015 and was estimated to be 27.1% of revenues by the end of 2020.[5] While the cost of a screen-printing machine ranged $250,000 to $750,000, capital intensity, defined as the amount on plant and equipment compared to the amount spent on labor, was considered low. The capital intensity ratio for the industry was $0.08 of capital per $1 of labor.[6]

Concentration in the industry was low. No screen printer held 5 percent or more of the market share. Most screen printers were small operators that focused on local and regional markets.

[4] Refer to Profits as a Share of Revenue 2015 – 2020 graph (Rodriguez 2020 p. 20)
[5] Refer to Wages as a Share of Revenue 2015 – 2020 graph (Rodriguez 2020 p. 20)
[6] IBISWorld used the ratio of depreciation to wages as a proxy to capital intensity. IBISWorld considered a ratio of $.333 of capital per $1 of labor as high intensity, with a ratio of between $0.125 and $.333 of capital per $1 of labor deemed as medium intensity, and a ratio of below $0.125 considered as low intensity.

Spartanburg-Greenville, South Carolina, Area

The Spartanburg-Greenville, South Carolina area was situated in the I-85 corridor between Charlotte, North Carolina, and Atlanta, Georgia. The area was attractive to businesses as 94 million Americans lived within 500 miles of the location (Greater Greer n.d.). The area attracted both domestic and global companies engaged in the manufacturing, distribution, logistic and technology industries focused on the automotive, aerospace, biotech, and advanced materials manufacturing sectors (Stout 2018). Through Inland Port Greer, businesses had easy overnight access via rail services to the Port of Charleston 212 miles away (Greater Greer n.d.). Located in the area was the state's largest industrial employer, BMW Manufacturing. Co., LLC. and some of its suppliers. Volume-wise, the plant assembled the largest number of BMW cars worldwide (IndustrySelect 2022).

AOT's Challenges

Almost immediately after finalizing the acquisition, AOT's customer services representatives left the company, taking along four of AOT's top 11 clients, which included the largest customer that contributed 17.2% of 2016 revenues.[7] Prior to the acquisition, AOT serviced 338 clients. In the five months following the purchase, 66%, or 220 of 338 of its customers, had stopped doing business with the firm. By 2019, only 24% of the original client base was still an AOT customer. Exhibit 1 summarizes customer retention by revenue category. The 81 clients that stayed with the firm through 2019 generated slightly less than 50% of the 2016 revenues.

[7] According to Francisco Herrera, one of the top clients filed for bankruptcy shortly thereafter.

Exhibit 1. Customer Retention and their Contribution to 2019 Revenues

Source: Create from AOT's Customer Database as of June 2016 and December 2019

Yearly Revenue Per Customer	Pre-acquisition		Post-acquisition through 2019	
	Number of Customers	% Of 2016 Revenue	Customers Retained	% Of 2016 Revenue
> $10,000	11	63.6%	7	33.28%
$1,000 and $10,000	77	25.7%	32	11.76%
< $1,000	250	10.7%	42	2.50%
Total	338	100.0%	81	47.54%

Under previous ownership, AOT focused on servicing their *"house accounts."*[8] The company used customer service representatives to manage the reorder process from these long-standing clients. Management had paid no attention to nurturing new relationships. Consequently, AOT had no employees focused on new business development.

With the rapid exodus of AOT's top clients and the lost opportunity to implement the 3PL business, Pedro worried about the profitability of the venture. Exhibit 2 shows the screen-printing cost and transportation cost for a garment if the service was provided in Honduras versus in South Carolina. Although several clients outside the sport apparel industry were enthusiastic about the speedy delivery of apparel, they were hesitant about the 15.5x increased screen-printing cost of doing business with AOT. The differential in cost was driven by labor costs. The labor cost per hour in Honduras was $2.10 compared to $12 per hour in Spartanburg area.[9]

[8] House accounts refer to accounts that are not managed by salespeople. The accounts are considered as owned by the firm and managed by individuals who provide services and support for repeat orders Forbes (2018).

[9] South Carolina had no state minimum wage law, and therefore federal law stipulated the minimum (U.S. Department of Labor 2022).

Exhibit 2. Screen-Printing Cost, Shipping Cost and Total Cost Per Unit by Location

Source: Pedro Martinez and Francisco Herrera

	Screen-printing Cost per Unit	Per Unit Shipping Cost Puerto Cortes, HN to Spartanburg, SC[10]	Total Cost per Unit
C&S - Honduras	$ 0.10	$ 0.0755	$ 0.1755
AOT – South Carolina	$ 1.55	$ 0.0755	$ 1.6255
AOT to C&S Cost	15.5x	1x	9.2621x

Faced with the collapse of the original business plan, C&S shifted the focus to a business-to-business model in which AOT provided full screen-printing services, including art design services, garment selling and screen printing in the South Carolina market. Consequently, Pedro and Francisco directed their attention to new client acquisition and retention.

Employee turnover also presented challenges for AOT. As shown in Exhibit 3, employee turnover in the production and customer service area was an issue over the three-year period since the acquisition. As of 2019, only 4 employees who worked for the previous ownership remained with the company, none of which were at the management level.[11] Six months after the acquisition, Francisco introduced management stability by hiring Mathew Hansen as the New Business and Technical Manager, while at the same time appointing Cesar Duron, a C&S Investments employee, as AOT's operations manager.

Exhibit 3. Employee Turnover by Functional Area

Source: Created from AOT's Employment Database 2016 through 2019

Area	Number of Voluntary and Involuntary Departures	Number of Positions Available and Filled	Turnover Percentage
Art	2	2	100%
Customer Service	8	2	400%
Production	87	13	663%

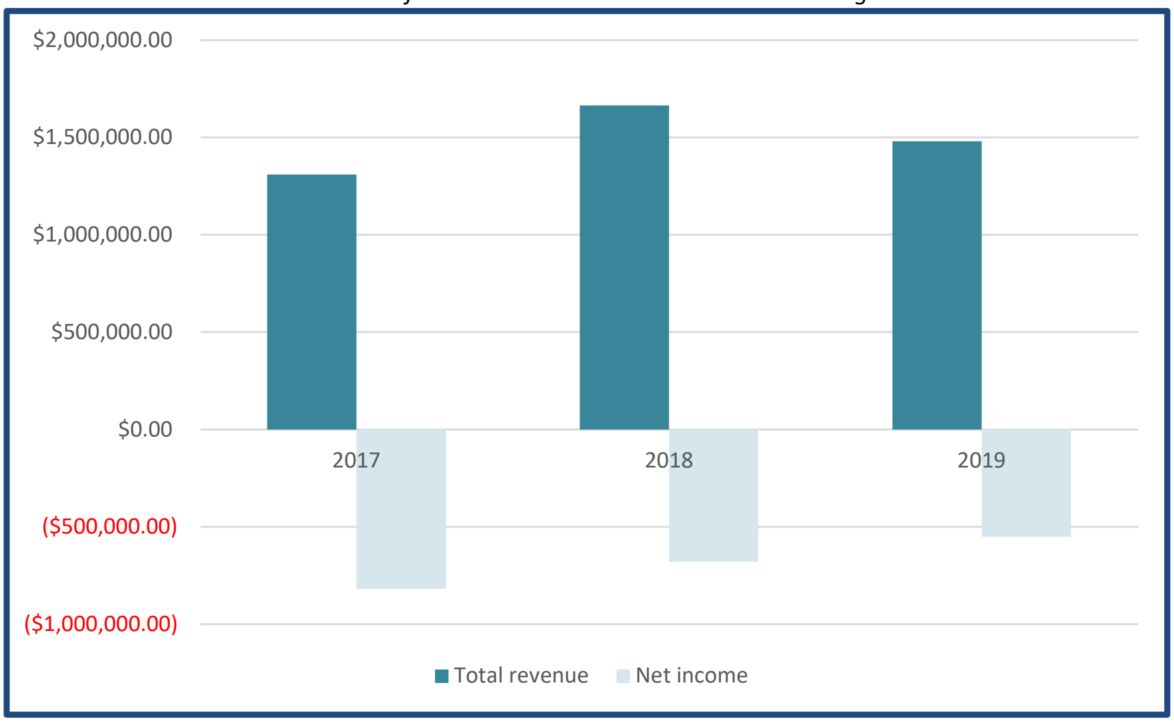
[10] Shipping costs were based on a 40 ft shipping container using 50% of the cost required to ship a similar container on October 14, 2022, to reflect pre-pandemic shipping costs. To facilitate comparison, we assumed the screen-printed items from Honduras were shipped to a client in Spartanburg, but garments screen printed in Honduras were shipped to the port of entry specified by the client which could result in lower shipping costs. (P. Martinez, personal communication, October 14, 2022).

[11] The employees who remained worked in art and design, plant maintenance, production supervision and printing.

Overall, the challenges faced by AOT negatively affected its profitability. AOT experienced a loss of almost $820,000 after its first full year of operations. Process improvements and a focus on new business development improved its fortunes, but not well enough to eliminate the losses. As shown in Exhibit 4, the losses narrowed over the next two years. By the end of 2019, AOT's loss was down to $551,000.

Exhibit 4. Revenues and Profits

Source: Created from AOT's Income Statement 2017 through 2019

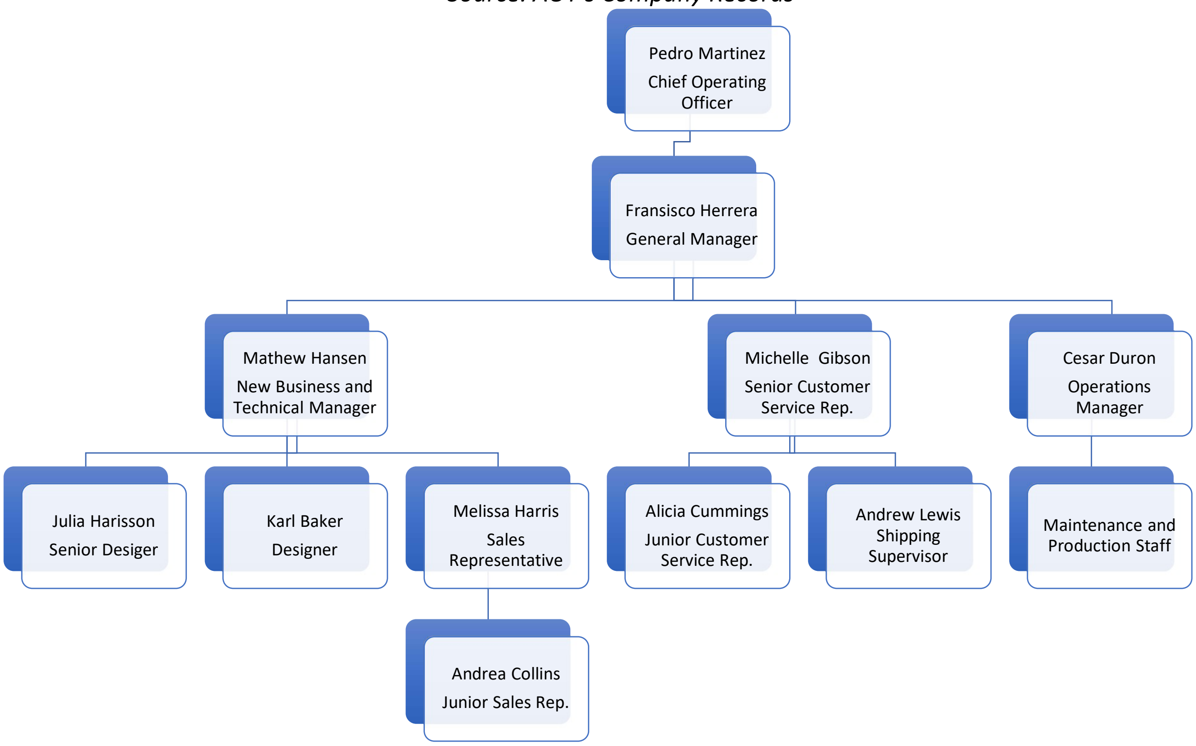


AOT's Employees

Exhibit 5 presents AOT's organizational structure. AOT operated with 22 employees.

Exhibit 5. Organizational Chart

Source: AOT's Company Records



Pedro Martinez, COO of C&S Investments, earned a bachelor's degree in industrial engineering from Georgia Tech in 1987 and an MBA from the Wharton School of Business in 1990. Upon his return to Honduras, he led his family's expansion into the cut and sew apparel industry. His industrial engineering background helped him achieve operational efficiencies required to be profitable in an extremely competitive industry. As of 2019, Pedro's family business ranked among the top 10 largest employers in Honduras.

When discussing C&S's early years, Pedro indicated he was open to assuming risk, but stated:

> *"My risk-taking attitude has diminished over the years as we have achieved economies of scale, and we have become a profitable mature company. I have become more conservative, but I am willing to evaluate investment opportunities as they present themselves and assess the risk-return tradeoff."*

He said that the scale of the AOT project was insignificant compared to their typical investment and had been comfortable moving forward with the project. He stated, *"Now that the next generation of the family is in college, we are seeking to diversify our business to areas unrelated to the apparel industry."*

Pedro appointed Francisco Herrera as AOT's General Manager. Francisco earned a bachelor's degree in computer science from the Tecnológico de Monterrey in Mexico. He had over 20 years of experience in the cut and sew industry in Honduras and had been with C&S Investments for over a decade. In addition to overseeing AOT's operations from Honduras, he also focused his efforts in attracting large clients like the C&S Honduran customer base because as he pointed out, *"We need these large customers to be our fillers in order to utilize our unused production capacity throughout the year."* Francisco said:

> *"My beliefs align with the owners of the company. We are relationship builders. Pedro and I spend a lot of time visiting and communicating with our clients, making sure that we have met their needs. I like that we do not cut corners. We build things the right way from the beginning."*

Cesar Duron was the operation manager for AOT. Like Francisco, he managed daily production operations remotely from Honduras where he also was C&S Investments operations manager, with extensive experience in plant management. He had been with C&S Investments for over 20 years. Cesar earned a bachelor's degree in mechanical engineering from the Universidad Autónoma de Honduras. Cesar worked with Pedro Martinez on the plant layout and design. Leveraging technology available, he was able to remotely communicate with his lead employees through the day and address any issues that needed attention.

One of his first tasks was to modernize AOT operations by adapting C&S technology and processes. As Cesar described,

> *"When we started, there was a bulletin board full of clipboards. Everyone would run to the clipboards to make notes on a specific order and figure out where the order was in the process and needed to go. We adapted the workflow process from C&S to fit the scope of the South Carolina operation and introduced technology that facilitated the tracking of orders from beginning to end."*

Cesar commented that lead times was one of the significant differences between the Honduran and South Carolina operations.[12] He indicated that the lead time in Honduras was between three to three-and-half months from the receipt of the order until the order delivery, but at AOT the lead times were as few as five days. He noted:

> *"If we receive an order on Friday and they want the order next Friday, we must place the order right away and purchase the goods that we are going to screen print. We are going to start receiving the goods on Monday. We will need art approval by Tuesday to burn the screens on Wednesday and start production on Thursday to be able to ship on Friday."*

Melissa Harris became the first sales representative hired by AOT towards the end of 2018. Melissa came from the hospitality industry and built much of her book of business from area bars, microbreweries, and other entertainment venues. Melissa supervised and trained Andrea Collins who became the second salesperson hired by AOT. In describing what she did, Melissa stated,

> *"I work with repeat customers that I acquired since I started here and get a lot of referrals and I reach out to customers that have ordered in the past. Andrea focuses on getting new leads and new customers. Her focus is on schools and athletic programs right now and building other niches."*

Melissa recognized that there are other niche markets in the area, such as manufacturing and warehousing, but to do so, the company had to hire at least one more sales representative.

In the initial months of training, Melissa worked with Bill Vicks, a sales representative from C&S Investments, with over 40 years of industry experience in the screen-printing business. Bill told Melissa that the biggest mistake made by salespeople when they visited prospective clients was to take product samples:

> *"Clients know what T-shirts look like and they have seen caps before. The salesperson needs to learn about the client, not the other way around. Once the salesperson knows the client, he or she can offer timely advice on products that meet the client's needs and assures the sales."*

[12] In Honduras, C&S Investment was a *"full package"* business. It provided all the raw materials to manufacture the garments that were eventually screen printed to client specifications.

He emphasized that a relational selling approach, rather than transactional selling approach, would allow AOT to build a repeat book of business founded on product quality and increased customer satisfaction. As a B2B firm, there was a strong potential for repeat business in both the contract and custom side of AOT's operations. Salespersons needed to establish a relationship with clients, learning their needs and buying patterns, as part of building ongoing sales relationships.

Michelle Gibson, AOT's senior customer service representative who was assigned to work with its largest clients, managed the order fulfillment process from supplies purchasing to order shipping. Michelle also performed AOT's human resources functions. She saw herself more as an office manager than a customer service representative. Michelle identified labor issues as the biggest challenge. With the BMW assembly plant and its suppliers in the area, Michelle commented:

> *"It is really hard to compete in this market for employees and get them to show up and stay with big industry and warehouses that surround us."*

In 2019, Spartanburg had significantly higher employment in production occupations compared to the national average, representing 17.4% of local employment compared to 6.2% nationally. The average hourly wage in the production sector in Spartanburg was $19.90, compared to the national wage of $19.30. However, production occupations in Spartanburg in the textile and garment fields were at the low-end of the pay spectrum, ranging between $10.30 and $12.98 per hour (U.S. Bureau of Labor Statistics 2020). The wage differential made it hard to retain production line employees at AOT.

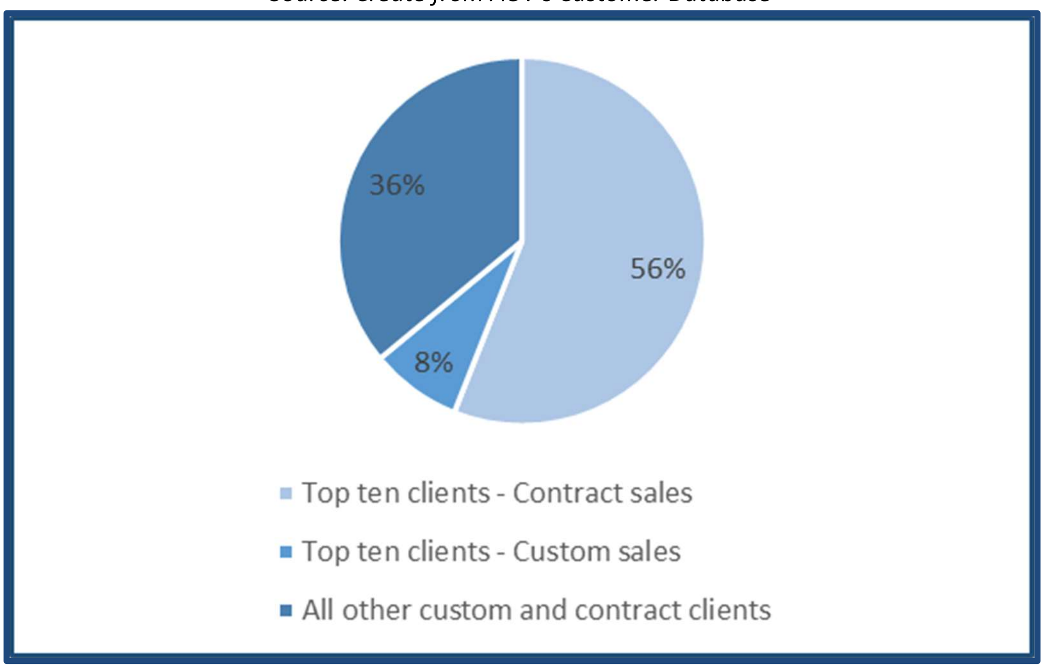
The Customers

After abandoning the 3PL strategy, AOT operated as a traditional screen-printing company focusing on business-to-business (B2B) sales. The company sorted its customers into two categories: contract sales and custom sales. The distinguishing factor between the customer bases revolved around who supplied the item (the blank) to be screen printed. In contract sales, the customer supplied the item. With custom orders, the client bought the item from AOT. Due to this difference, the profit margin from custom sales was higher than for contract orders. Volume-wise, contract orders were typically larger orders while custom orders were typically low volume.[13]

Approximately 64% of all revenue was generated by the top 10 customers, with two clients contributing about 37% of AOT's 2019 revenues. Seven of the top ten clients were contract customers. As shown in Exhibit 6, the top seven contract clients produced 56% of all revenues, seven times the revenue generated by the top three custom clients.

Exhibit 6. Sales Concentration for 2019

Source: Create from AOT's Customer Database



[13] The minimum order quantity for contract orders was 144 items compared to a 36-item minimum for custom orders. Orders above 360 items were considered high volume orders. (F. Herrera, personal communication, July 21, 2021).

Contract customers included clients who remained with the company after the acquisition and new customers from Francisco's client acquisition efforts. Contract clients dealt directly with Michelle, the customer service representative, for all aspects of the transactions as AOT treated the accounts as house accounts. Melissa and Andrea focused on new custom sales and customer retention efforts. Contract sales clients routinely reordered regularly compared with custom clients who frequently ordered once or twice a year. While custom order quantities were typically less than contract orders, custom orders were sometimes sizable. For example, one of Andrea's clients, a daycare, typically placed a custom order once each year, but the order regularly included more than 1,000 shirts and other paraphernalia.

Products and Services

AOT, like most screen printers, offered value-added services to its clients. AOT charged between $0.45 to $0.65 per garment for services. Twenty percent of AOT's clients took advantage of these services. Exhibit 7 lists the services provided to each client base. For custom clients, AOT offered hosted website services free-of-charge that allowed individuals to place apparel orders around the clock. Companies used these services for branded employee attire and by charitable organizations for fundraising purposes resulting in a streamlined process. Exhibit 8 and 9 depict the process for charitable organizations and for company employee attire, respectively. The largest custom clients with employee order websites ran year-round.

Exhibit 7. List of Service Provided by Customer Category

Source: Created from an Interview with Francisco Herrera

Service	Contract	Custom
Store blanks	✓	
Sale of blanks		✓
Store printed goods	✓	✓
Label	✓	✓
Fold	✓	✓
Hangtag	✓	✓
Package item	✓	✓
Rebrand by changing neck label	✓	✓
Ship directly to client	✓	✓
Ship to client’s retail stores	✓	
Ship directly to client's customers	✓	
Ship directly to fundraising participants*		✓
Hosting order website*		✓

*These services are not standard services provided by small screen printers.

Exhibit 8. Charitable Organization Order Flow

Source: Created from Interview with Mathew Hansen, AOT’s Technical Manager

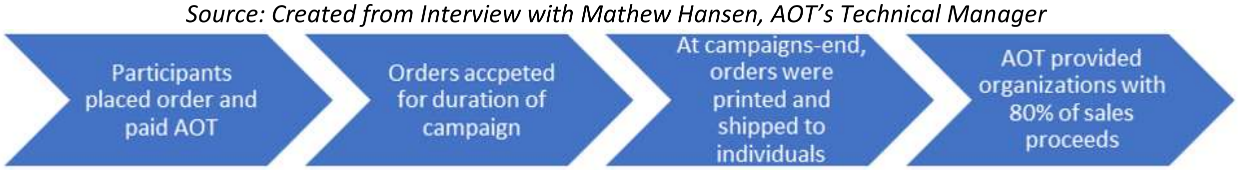
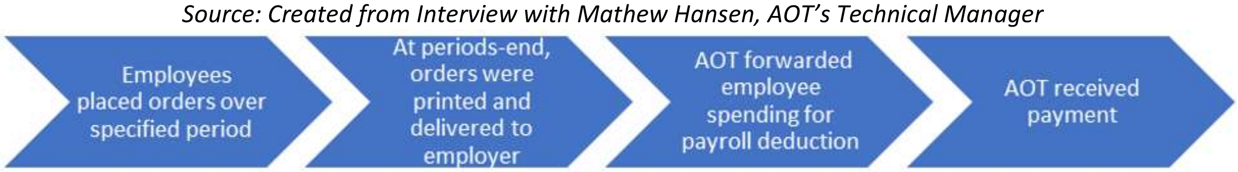


Exhibit 9. Business Organization Order Flow

Source: Created from Interview with Mathew Hansen, AOT’s Technical Manager



The Selling Cycle

While contract sales provided demand stability, AOT's success depended on building its custom sales efforts. Bringing in new custom clients required a great deal of effort. While some new accounts were acquired quickly, with the first order signed within about 2 months of the initial sales contract, most accounts took much longer to develop. Melissa and Andrea considered six months to be typical of client development – in other words, the typical new client made its first order about 6 months from the salesperson's first visit to the client. Some clients took even longer to land, one of the company's largest clients took more than a year to develop the business relationship. But each client acquired added to the revenue base and production demand.

The selling process involved more than just getting new business contracts. Once a client was on board and ordering, Melissa and Andrea needed to maintain regular contact and conversations to develop the client relationship. Andrea and Melissa met with existing clients often, limiting their ability to pursue new leads. These ongoing meetings were critical to building sales. As Bill, Melissa's trainer, pointed out,

> *"This industry is only seasonal if you let it be – most of these large clients have big events coming up every year. A good salesperson cultivates a relationship with the client and gets to know their long-term needs. Knowing their needs lets the salesperson reach out to the client a few months before a major event to solicit an order for the event. Selling in this industry is equal parts acquisition of new accounts and cultivation of existing accounts."*

Andrea and Melissa concurred that managing existing accounts was crucial for sales generation. To this end, Melissa pointed out that they were able to actively manage about 20-25 large accounts each at a time. When they had fewer accounts in their portfolio, it was easy to take time to acquire new relationships. When they had more than twenty-five large accounts in their portfolio, it became difficult to get new leads and easy to miss opportunities with existing accounts. Melissa explained that finding new business opportunities is really a function of studying your normal market, observing that *"A good salesperson never stops selling."* Melissa mentioned that she developed a successful contract with an area amusement park while on a vacation with her family. She observed that the park was getting ready to launch a new ride. Follow-up calls to the amusement park confirmed that there was a major marketing campaign that coincided with the opening of the new ride. AOT quickly developed a T-shirt and branded merchandise order for the campaign. Once on board, the amusement park became a consistent, regular source of production orders.

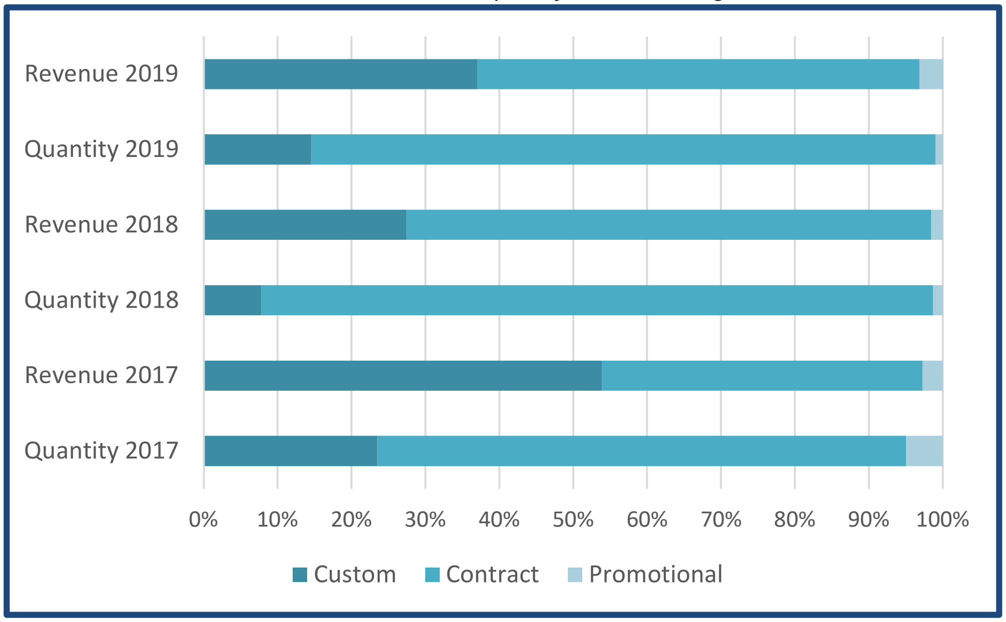
Financial Summary

Contract and custom orders made up 97% of AOT's production and sales. The rest included the sale of promotional items like water bottles, freebies, and banners. AOT outsourced the branding of these items to other vendors. AOT provided these products as a service to their clients. Other items made up too small and too infrequent sales and were not a material part of AOT's plan.

Exhibit 10 reports the percent of revenues and quantity sold by sales category over the period 2017 through 2019. Except for 2017 when the company lost two contract customers (which combined generated 26.6% of overall revenue), contract sales revenue was greater than the revenue generated through custom orders. While the average price per unit for custom sales was at least 3.5 times that of contract sales prices, less than 25% of the units produced were associated with custom orders.

Exhibit 10. Percent of Revenue and Percent Quantity Sold by Sales Category

Source: AOT's Financial Reports for 2017 through 2019



Due to higher sales prices, custom sales had more lucrative gross margins than contract sales. As Cesar explained,

> *"Managing production becomes more challenging as you do not want to have too many low margin orders at the same time. We need contract orders to help pay the bills, but custom clients to make a profit."*

Cesar indicated that AOT spread contract orders across the week, leveling out production capacity, while working in higher margin custom orders as they came in. Refer to Exhibit 11 for the average sale price, cost of goods sold and gross margins by sales category and Exhibit 13 for the income statements. The stability of long-term, predictable, high-volume contract sales helped AOT cover their fixed costs, particularly when compared to the unpredictable nature of custom sales.

Exhibit 11. Average Sale Prices, Cost of Good Sold and Gross Profit Margin by Sales Category

Source: Created from AOT's Financial Reports 2017 through 2019

		2017	2018	2019
Contract	Percent of unit sold	71.50%	90.91%	84.41%
	Average price per unit	$1.75	$1.53	$2.20
	Average cost per unit	$3.25	$2.21	$3.13
	Average gross margin per unit	($1.50)	($0.68)	($0.93)
	Units sold	325,210	770,811	402,010
Custom	Percent of units sold	23.52%	9.09%	14.60%
	Average price per unit	$6.60	$6.91	$7.89
	Average cost per unit	$6.10	$5.24	$6.73
	Average gross margin per unit	$0.50	$1.73	$1.16
	Units sold	106,998	66,070	69,546
Overall	Average price per unit[1]	$2.88	$1.96	$3.11
	Average cost per unit[1]	$4.06	$2.98	$3.69
	Average gross margin per unit	($1.18)	($1.02)	($0.58)
	Units sold[2]	454,840	847,908	476,240

[1]Figures are based on weighted averages.
[2]Overall units sold include promotional sales.

Francisco commented that AOT lost money on 90% of contract clients, breaking even on those that used value-added services. When both product lines were combined, AOT's gross profit margin was -41%, -26%, -19%, for the 2017 through 2019 years, respectively. According to the RMA (Risk Management Association) Statement Studies (2021), the profit margin for screen printers generating $1 million to $3 million in sales averaged 50%.

Exhibit 12 shows the breakeven analysis results for AOT's operations. 'To breakeven in 2017 and 2018, AOT would have needed to use 82% and 90% of its plant capacity, respectively, compared to 32% in 2019. Refer to Exhibit 12 for the details on breakeven analysis over the period.

Exhibit 12. Breakeven Analysis

Source: Created from AOT's Income Statements for 2017- 2019

	2017	2018	2019
Fixed Cost[1]	$1,083,361	$1,176,123	$1,050,058
Contribution Margin[2]	$0.58585	$0.57934	$1.27430
Breakeven Quantity	1,849,213	2,030,101	824,057

1. Figures include fixed costs associated with cost of goods sold, operating expense, interest expense and other expenses not included elsewhere since the analysis is concerned with the breakeven for existing operations (Ross *et al.* 2022, p. 368).
2. The contribution margin is the weighted average of the difference between price and variable cost for each product (Farhat's Accounting Lectures 2014). The contribution margin can also be determined by taking the difference of the weighted average price and weighted average variable cost for the various products.

Exhibit 13. Income Statements

Source: AOT's Financial Statements for 2017- 2019

				Common-sized		
	2017	**2018**	**2019**	**2017**	**2018**	**2019**
Custom Sales	$ 705,560	$ 456,503	$ 548,592	54%	27%	37%
Contract Sales	$ 567,839	$ 1,182,395	$ 884,516	43%	71%	60%
Other Sales	$ 35,618	$ 26,292	$ 47,117	3%	2%	3%
Total Revenue	$ 1,309,017	$ 1,665,190	$ 1,480,226	100%	100%	100%
Direct Materials	$ 505,204	$ 345,161	$ 374,239	39%	21%	25%
Direct Labor	$ 459,549	$ 728,008	$ 507,165	35%	44%	34%
Indirect Labor	$ 401,329	$ 436,823	$ 291,713	31%	26%	20%
Facilities Rent	$ 227,864	$ 219,547	$ 224,448	17%	13%	15%
Depreciation and Amortization-Manufacturing	$ 131,864	$ 232,016	$ 234,118	10%	14%	16%
Other Manufacturing Overhead	$ 120,751	$ 143,311	$ 126,723	9%	9%	9%
Total COGS	$ 1,846,560	$ 2,104,867	$ 1,758,406	141%	126%	119%
Gross Profit	$ (537,543)	$ (439,676)	$ (278,180)	-41%	-26%	-19%
Depreciation and Amortization - Non-Manufacturing	$ 13,552	$ 16,532	$ 19,489	1%	1%	1%
SGA Expenses	$ 229,887	$ 186,603	$ 219,171	18%	11%	15%
Operating Income (EBIT)	$ (780,983)	$ (642,811)	$ (516,839)	-60%	-39%	-35%
Interest	$ 16,975	$ 23,722	$ 16,743	1%	1%	1%
Other Expenses	$ 21,441	$ 13,475	$ 17,341	2%	1%	1%
Earnings Before Taxes	$ (819,399)	$ (680,008)	$ (550,923)	-63%	-41%	-37%
Taxes	$ -	$ -	$ -	0%	0%	0%
Net Income	$ (819,399)	$ (680,008)	$ (550,923)	-63%	-41%	-37%

The Strategy

Promotional goods, as a category, seemed unlikely to generate over 5% of sales and currently accounted for no more than 3% of sales. Because of this, custom and contract sales had to carry the firm to profitability. Francisco and Cesar assumed that, at any given sales level, the share of custom sales volume needed to increase. AOT's target, therefore, was 30% of custom units sold, with the rest coming from contract sales and an incidental amount from promotional sales. They also believed there was room to improve their per unit margins. Prices for both the lower-priced contract business and the higher-priced custom business could be raised while variable costs per unit could be reduced. As part of the strategy, AOT pursued large-volume contract clients who bought valued-added services with simple print runs of 1 to 2 colors. The screen-printing cost per item was estimated at $0.45 per garment. By the end of 2019, AOT acquired a simple-run print client that committed to a weekly production of 4,000 T-shirts per week.

With respect to pricing, Francisco stated,

> *"Our ability to raise prices depends on building strong relationships with clients and our ability to deliver quality products in a timely manner. In this industry, clients are open to paying more for services based on a vendor's performance in terms of on-time deliveries, lower defective percentages, willingness to accept quick turnaround orders, and the willingness to accept more complex printing jobs."*

Francisco indicated that reliability and flexibility were rewarded and that these traits had been at the core of C&S and AOT's operations. In terms of costs control, Francisco stated,

> *"The key is having multiple strategic suppliers for the same type of raw materials, mainly ink and garments."*

Francisco discussed that typically suppliers gave AOT advanced noticed when they were running low on inventory and how much they were able to sell AOT in the next order. This gave AOT the ability to approach other vendors for the needed raw material avoiding shortages that affected AOT's on-time delivery commitments. He also commented that while printers normally had multiple supplier options that allowed them to buy from the lowest cost vendor at any given time, the ability to negotiate pricing was dependent on the strength of the business relationship and becoming a preferred buyer. Francisco commented that Michelle worked closely with the suppliers to foster the working relationship that helped AOT become a preferred buyer.

AOT believed it could improve margins through better pricing, leveraging their reliability and agility, and lower costs achieved by reducing complexity in contract orders and improving relations with AOT suppliers. Once a positive gross margin was realized, the firm could target a volume of business which would finally allow it to reach profitability.

AOT knew it had the machinery necessary to reach its undefined target. Its investment in machinery provided a capacity of 43,000 items per week (about 2,250,000 per year). AOT was running with a reduced production crew and its current labor force could produce about 13,000 units per week (about 675,000 units per year). While labor market conditions had been tight, Pedro believed that AOT could grow its labor force to produce 19,000 items per week (about one million per year) through a mix of hiring, overtime, and productivity gains. Nonetheless, AOT would not increase labor without an increase in custom sales, and to date, the company had not sold more than 107,000 custom units in a single year. AOT's two salespeople successfully added new custom clients and were balancing lead acquisition while developing sales from existing clients.

Francisco's financial analysis indicated that with AOT's current resources and with improvements in gross margins, a push towards 30% custom sales volume would allow AOT to finally generate a profit. Beyond the 30%/70% split between custom and contract sales volume, Francisco understood that pricing and cost controls would also be critical in generating a profit. Exhibit 14 reports the target figures that AOT estimated would help the company earn a profit. The figures in the contract column included the expected impact of increased large-volume contract clients who bought valued-added services with simple print runs of 1 to 2 colors.

Exhibit 14. Target Pricing and Cost Information

Source: Francisco Herrera Interview

	Contract	Custom
Average Pricing	$2.70	$9.80
Average Variable Cost	$0.90	$6.00
Fixed Cost	$1,026,000	

Will the Strategy Work?

AOT needed to turn a profit, and it needed to do so soon. The financial resources needed to support the new strategy were in place, but could the strategy itself succeed? Ultimately, AOT needed to grow or shut down, and it was running out of time.

The questions, which remained unanswered, involved:

(1) How far did AOT need to grow sales to reach profitability under its 30% custom sales volume plan?

(2) Could AOT realize the price and cost targets it had established?

(3) Did AOT have the appropriate physical and human resources necessary to reach a profitable sales volume?

and,

(4) Would Pedro's plan, if realized, lead to profitability?

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