THE DEFINITIVE GUIDE TO SUPPLY CHAIN BEST PRACTICES

Comprehensive Lessons and Cases in Effective SCM

Council of Supply Chain Management Professionals and

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inventory management, transportation management, marketing, and distribution are more difficult to plan for in the not-for-profit scenario. Though basic sales forecasting is possible, inventory forecasts are subject to wild variance swings from period to period and product type to product type. As one Goodwill executive once explained to Chris, "…we generally have some idea as to *how much* we are going to sell; we just have no idea exactly *what* we are going to sell."

To some extent, the mysteries surrounding demand and supply at OGI are related to the way it accounts for and accepts donations received from donors. At OGI, a donation is defined internally as the receipt of a bundle of unwanted goods from a donor, regardless of content, mix, or size, resulting from a single drop-off or pickup. In other words, one donor could bring a truckload of used books, lamps, and furniture to the Walker street distribution center, while another could request home pickup of a small sack of slightly worn clothing, yet both would be credited with having made a single donation. This process was born from the necessity to make the donating process as easy and quick as possible from the perspective of the donor; donors don't want to wait around while each of their items is sorted, examined, categorized, and catalogued into an inventory management system. In fact, many of the donors who want to gain a tax credit for their charitable activity still prefer that the specific content of their Goodwill donation remain somewhat private or anonymous.

Chris and Heather have often discussed whether different definitions and accounting for donors would be desirable, but neither has been able to identify a solution that justifies the additional inconvenience to the donor (the "lifeblood" of the OGI organization) that alternative systems almost necessarily create.

However, though this system is effective at increasing donation frequencies, it renders a number of complexities for the retail operation. Because items are received in mixed containers of unpredictable volumes received at seemingly random time across a universe of stores within the territory, no viable way of creating store-to-store (and in some cases, intrastore) inventory visibility has yet been discovered. Furthermore, due to the very low average sales price per item, the application of both traditional and emerging inventory technologies (e.g., bar coding and/or RFID) seems cost prohibitive to Chris. For example, the average unit of clothing inventory sells for approximately $2.52, with around $1.75 of the sales price tied up in labor, utility, and retail leasing costs. The proportional increase in costs associated with implementation of inventory technology would therefore swallow up much of the remaining margin, assuming 2008 per unit technology prices. Chris is currently struggling with the decision to invest in supply chain technology as a methodology for increasing inventory visibility, but given that he knows little about the technologies or their implementation, he seems to be leaning against it, and is searching for a less costly, more immediately effective solution.

In addition, the volatility in the OGI donation supply market is accompanied by time-based complications in the demand market. For instance, donated items with a seasonal supply component are often received immediately following the season in which they are most useful (having been used then by their donors). Thus, customers shopping OGI retailers will tend to demand products that are useful in the near future, while the store's inventory is full of supply most useful in the recent past. This means, for instance, that though a fair number of customers will shop an OGI retailer for a winter coat during the month of October, the racks are fairly likely at that time to hold only a few winter coats, while at the same time holding an excessive number of swimsuits, t-shirts, and other summer wear. Goodwill has yet to develop a demand management system capable of eliciting certain types of donations during and immediately prior to the season when their sale will be most likely and profitable. Marketing efforts directed toward supply and demand balancing in the event of lagging sales for a particular item have traditionally been ignored by the company given the inherent randomness of the acquired inventory.

Both Chris and Heather believe that this sort of supply-demand misalignment is simply a necessary but unfortunate obstacle that must be dealt with by nonprofits, though they each express willingness to be convinced otherwise. However, other Goodwill corporations in distant parts of the United States and Canada have experimented with demand solicitation in advance of seasons with some modest success.

Logistics Management Issues at GIO

In addition to supply uncertainty and demand planning issues, Chris is also convinced that a key element of OGI's future success is the more effective utilization of the capital assets OGI has devoted to logistics. In this regard, two elements are of primary concern to both him and Heather: the use of three OGI-owned trucks and the long-term leases held for the (currently 13) retail shops and attended donation centers. A secondary concern is the $37,500 worth of retail fixtures, aluminum racks, storage bins, cash desks, and electronic surveillance equipment collected from the two now-closed retail locations that currently sit dormant in the Walker DC.

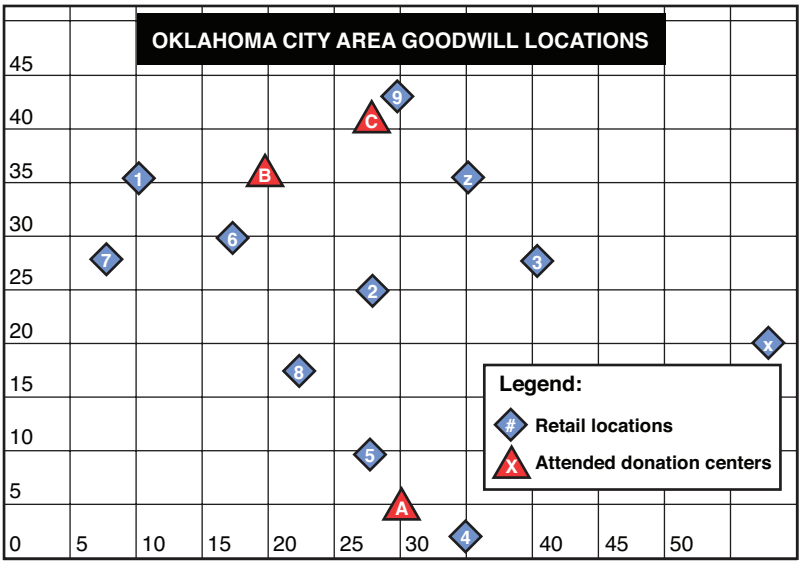
Currently, the three trucks are running at 73 percent aggregate capacity. If OGI can implement a plan to increase truck capacity utilization, efficiencies will be gained and OGI will be in a better position to achieve the long-term goals set out in the plan. Each of the three trucks in the OGI fleet holds an average of 50 donations when loaded at full capacity. Two of the three trucks were purchased in 2007 as replacements for previous trucks already sold at salvage; each cost $72,000 and has a total eight-year depreciation basis. The other truck, purchased in 2005 for $64,000, is in the fourth year of a nine-year depreciation basis. One of the trucks (A) is devoted solely to home pickups of

donations, which are scheduled roughly five to seven business days in advance. The remaining two trucks (B and C) run daily routes between the Walker DC, the retail stores, and the attended collection centers. If home pickups are scheduled and are located roughly along these routes, then these are incorporated into the B and C trucks' daily schedules; all other home pickups are handled by truck A. Based on the data, Chris's first inclination is to sell one of the trucks and spread the current capacity among the remaining two. However, if donation demand increases as expected in the five-year plan, this could possibly leave OGI with insufficient capacity to transport its inventory by 2011.

Additionally, comments made by Heather at the most recent month's managers' meeting indicate that she views the closure of the Shawnee and Britton locations as steps toward optimizing the OGI retail network. To this end, she has asked Chris to collect the necessary data to determine whether OGI would benefit by adding an additional retail store and/or attended collection center(s). Though he is not sure that such a maneuver would be supported in the short term by significant added sales, he has always believed that OGI needed the additional retail presence in order to defend its territory from a brand-awareness perspective. Therefore, he is interested in finding two to three potential locations where future stores could effectively be established (assuming, of course, that space is available). Furthermore, both Chris and Heather are wondering whether the attended collection centers are adding value to the OGI supply chain. Unfortunately, neither of them has the requisite experience in the area of supply network optimization to allow them to make an adequate assessment.

Concerns for the Immediate Future

Chris's proposals are due to Heather in one week, and given his limited experience in the areas of logistics and supply chain management, he needs any assistance that can be acquired. He has sought out your assistance as a logistics/supply chain consultant in addressing the issues currently facing OGI. Any information and/or wisdom that can be provided will be viewed as a helpful, positive step toward cementing the relationship between yourself and OGI, and could lead to additional future business between you and the organization.



Notes: Retail location #10 (Stillwater) is not shown on map. Locations X and Z represent the recently closed Shawnee and Britton Road retail locations, respectively. Coordinates are scaled in miles.

Location	Type	X-Coordinate	Y-Coordinate	Location	Type	X-Coordinate	Y-Coordinate
1—Council	Retail	10	35	8—Penn	Retail	23	18
2—Walker	Retail	28	25	9—Edmond	Retail	30	42
3—Reno	Retail	41	27	10—Stillwater	Retail	53	80
4—Norman	Retail	35		A—North Norman	ADC	30	5
5—Moore	Retail	27	10	B—May	ADC	20	35
6—MacArthur	Retail	18	29	C—Kelly	ADC	28	39
7—Yukon	Retail	7	27				

Exhibit 1 Goodwill Industries of Oklahoma: retail store and attended donation center locations

Table 1 Monthly Sales, January 2008–December 2008, by Location, in Dollars

Location	J08	F08	M08	A08	M08	J08	J08	A08	S08	O08	N08	D08	2008	Avg.
Council	42,490	33,489	40,310	36,418	39,078	38,858	44,520	37,807	36,629	39,927	43,225	46,523	479,274	39,940
Walker	20,682	20,997	20,413	19,001	18,351	18,115	19,664	21,037	18,930	22,228	25,526	28,824	253,768	21,147
Reno	103,645	97,369	107,405	95,998	83,887	84,422	91,732	96,673	99,138	102,437	105,735	109,033	1,177,474	98,123
Norman	38,448	37,269	39,190	35,569	39,178	39,880	41,857	41,824	40,080	43,378	46,676	49,974	493,323	41,110
Moore	39,213	35,517	38,313	34,039	38,691	30,469	42,493	44,047	38,637	41,935	45,233	48,531	477,118	39,760
MacArthur	53,394	47,962	54,536	48,385	50,398	52,207	60,858	62,177	60,589	63,857	67,175	70,483	692,021	57,668
Yukon	24,289	23,891	27,458	24,474	25,003	24,832	28,608	30,324	29,316	32,615	35,644	39,211	345,665	28,805
Penn	82,158	82,909	94,945	90,069	99,276	91,472	95,639	100,536	91,459	94,757	98,056	101,354	1,122,630	93,553
Edmond	45,963	45,561	47,055	45,723	46,545	57,932	64,120	58,621	62,441	65,739	69,037	72,335	681,072	56,756
Stillwater	24,658	25,690	29,937	26,269	28,641	25,904	26,446	29,906	27,606	30,905	34,203	37,501	347,666	28,972
Shawnee	38,776	38,425	44,117	39,552	38,177	38,920	36,749	33,115					307,831	38,479
Britton Rd	42,282	38,197	43,375	38,715	39,046	39,799	42,066	37,764					321,244	40,156
TOTALS	555,998	527,276	587,054	534,212	546,271	542,810	594,752	593,831	504,825	537,778	570,510	603,769	7,752,221	553,729

Table 2 Monthly Donations, January 2008–December 2008, by Location, in Numbers of Donations

Location	Ft^2	J08	F08	M08	A08	M08	J08	J08	A08	S08	O08	N08	D08	2008
Council	19,600	729	311	467	531	677	570	710	725	1,106	834	876	926	10,346
Walker	8,800	399	396	140	144	174	424	403	375	364	368	356	350	4,592
Reno	25,775	933	705	1,083	1,101	1,610	2,115	1,822	1,539	1,568	1,630	1,566	1,576	20,450
Norman	18,995	1,045	824	979	911	1,326	1,158	1,292	1,046	808	1,036	950	918	13,988
Moore	17,770	770	588	735	791	970	834	1,006	899	942	936	913	918	12,138
MacArthur	20,220	1,440	1,313	1,760	1,795	2,380	2,292	1,659	1,125	1,152	1,308	1,191	1,204	21,046
Yukon	15,900	728	471	828	787	765	794	796	965	862	866	884	856	11,333
Penn	23,000	912	714	993	1,040	1,232	1,227	1,201	1,262	1,010	1,145	1,126	1,081	15,335
Edmond	20,000	892	627	810	1,139	1,035	1,143	1,284	1,410	1,217	1,291	1,293	1,004	14,793
Stillwater	12,000	611	499	542	685	921	763	791	795	593	714	688	652	9,514
Shawnee	10,500	201	141	197	269	366	329	348	255					2,106
Britton Rd	20,400	706	646	600	660	759	788	791	608					5,558
NN										256	280	251	191	1,783
May										408	392	390	333	2,437
Kelly										272	380	399	425	2,504
Home Pickup		614	474	599	646	801	816	794	722	692	606	544	567	9,078
TOTALS	21,2960	9,980	7,709	9,733	10,499	13,016	13,253	12,897	11,726	11,250	11,786	11,427	11,001	157,001