

DSA & CPC

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Our associate, CPC Division of Logistics Solutions International is the premier business in its field having completed over 300 packaging optimization projects during the past 15 years. Their clients include some of the most recognized companies in the world including Kimberly Clark, John Deere, Hershey, Campbell Soup and Nestle. One of their well documented achievements was delivering a saving of \$500,000 by reducing a case of Tide detergent by one-sixteenth of an inch.

CPC's work has been covered in many magazines including Inbound Logistics, Logistics Management and Packaging Digest. Their accomplishments have been seen by the following national audiences:

Council of Logistics Annual Conferences in 1993, 1994, 1995
Canadian Association of Logistics Management in 1995 & 1998
Grocery Manufacturers of America Logistics Conference 1995
Logistics guru Bob Delaney specifically cited package redesign in his 1997 & 98 State of Logistics Report and identified CPC as the leading practitioner of this process.

So how does your packaging stack up? Are your shipping cases designed by experienced logisticians or is the job done by someone in marketing, advertising, R&D or manufacturing as it is in many companies? Some clients tell me they rely on their corrugated supplier. Think about that for a moment; do you really believe that the person who increases his paycheck by selling more cardboard is actually going to show you how to use the least amount of it? Even if they try to help their customers the reality is that most packaging suppliers don't understand the entire supply chain like CPC does. We are staffed with former logistics executives who understand transportation and warehousing as well as the impact a shipping case has on the entire distribution process. We know how pallet patterns, humidity and time impact corrugate strength and work those considerations into our recommendations.

Here is an observation on our work from an executive vice president of a major logistics company which has first hand experience with packaging changes we implemented: "I have experienced a remarkable improvement in packaging strength, cube utilization and damage control. All of these improvements are directly related to the work performed by CPC. It has been amazing to see the positive changes made in packaging design, pallet configurations and overall unit load improvements. There is virtually no case fatigue or damage related to poor packaging."

Typically CPC delivers a return of \$10 for each dollar clients spend on our services but we have many instances of 100 to 1 returns. We have numerous projects where clients saved multi millions from our work. Clients usually start enjoying these savings within 90 days from the time CPC starts a project. Where else in the supply chain can you find such significant savings so easily?

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Packaging Optimization

Typically, the size and strength of the corrugated shipping case is determined by someone far removed from the supply chain such as marketing, engineering or product development. Some companies utilize their box supplier for this decision; since the goal of a box supplier is to sell more corrugate isn't that akin to asking the fox to watch the hen house? More enlightened firms have packaging departments staffed by educated specialists using computer analysis to support their efforts. Unfortunately, no software alone is capable of analyzing shipping case size and strength as well as how the box impacts warehousing and transportation efficiency in the real world. This background information explains why packaging optimization is a major opportunity for improving logistics efficiency in most companies. And the opportunities are biggest in light density products which cube out a trailer before they weigh out and in products which tend to settle during handling such as frozen doughs and vegetables.

The firm with the best track record is Computerized Package Design of Canada [formerly Computerized Packaging Consultants]. Over the past 15 years this company has optimized the corrugated shipping cases for over 300 firms including Procter & Gamble, Nestle, Campbell Soup, George Weston, Hershey, General Foods, Kimberly Clark and Monro Auto Parts. All of these assignments have been garnered without any advertising; everything has come via word of mouth and CPD's reputation. The logistics opportunity of packaging optimization in general and the excellent track record of CPD in particular were cited by industry guru Bob Delaney in his 1997 & 98 "State of Logistics Report".

My personal involvement with CPD spans 10 years and two different companies where they delivered outstanding results for my department. When I first met Don Allison – former VP of Logistics for Johns-Manville and president of the Canadian Association of Logistics Management – co-founder and president of CPD it was merely a chance meeting at a dinner where we were both giving speeches. After I had checked on CPD's references and was told: "they can do what they claim" I brought them in to Rich Products [Buffalo based frozen foods manufacturer]. CPD analyzed our 15 biggest selling products and just bowled us over by identifying \$1.8 million in savings. I gave them 10 more products to analyze and they came back with an additional \$1.2 million in savings opportunity. The identified savings were so large, many in the company were skeptical but verification by internal audit of the numbers silenced the critics.

I have personally presented details of this \$3 million improvement project at five national conferences: twice at CLM annual conferences, twice for CALM in Canada and for the annual logistics conference of the Grocery Manufacturers of America. The project results have also been written up in seven different industry magazines. I received letters from numerous companies asking for details; one letter came from the Singapore Institute of Material Handling. A professor from the University of San Francisco called for detailed information he could take to Korea for presentation there.

Because of the success in driving logistics efficiency through packaging optimization

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at Rich Products, the Corporate Packaging Group was expanded and CPD became a permanent support organization to their efforts. In the mid 90's we scored another coup together. After Rich Products had acquired a Massachusetts based manufacturer of par-baked breads [baked to over 80% of completion and then frozen...truckloads cube out at 20,000 lbs] we had CPD analyze the entire line of corrugated shipping containers used by the plant. Up to that time because of freight economics the par-baked products had not been distributed west of Denver. During the year that marketing rolled out sales to the west coast from the plant in Mass, packaging optimization reduced our logistics expense for that product line by 21%. If marketing hadn't simultaneously expanded the sales area the savings would have clearly been much greater.

Other notable success stories include the assignment with a national manufacturer of private label paper and health care products. Annual savings identified exceeded \$2.2 million on only their ten largest volume items. CPD was able to add strength to the cases and still save 23% in packaging costs. Also, they developed a merchandising bin for the Sam's Club business that the client enjoyed. Top management was so pleased with the results that CPD was commissioned to design the packaging for a new product line the company was just developing. At another large paper company CPD delivered a 2% reduction in packaging costs while increasing pallet load and truckload size by 24% and over 8% in rail car capacity for a well known paper towel brand. On the same client's tissue product the results were an 8% saving in packaging, 44% increased loading capacity and warehousing cost reduction of 25%. Recently they showed a frozen cake manufacturer how to get 35% more product on each pallet than the recommendation the customer had received from their corrugated supplier free of charge.

So how does CPD deliver such impressive results? First, all of principals are logisticians so we approach packaging from a total supply chain basis which is relatively uncommon. We use commercial software as well as proprietary software we have developed in-house to analyze tradeoffs and is not available to anyone else. Lastly we apply our many years of experience to supplement the laboratory suggestions and make sure the changes are implementable in the real world.

Our typical approach is to measure the actual dimensions of the shipping cases being analyzed. We also ask for samples of the boxes to determine through analysis at the lab in Canada [Fenelon Falls, Ontario] whether the corrugate meets its published specifications – occasionally it doesn't. It is amazing how often our clients don't even know their own specifications or they are incorrect. The client firm is asked to provide actual handling, storage and shipping costs for the items being analyzed as well as the price paid for the boxes; this allows CPD to compare total supply chain cost of any changes we want to propose. Generally, it takes several weeks to complete analysis of a 20 item minimum and to prepare a written report for the client.

When CPD presents recommendations to the client they will take the form of revised case construction to deliver increased box strength for the same cost [we never reduce

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case performance unless the current standard is over spec meaning the customer is paying too much; at worst, case stacking strength remains the same and we usually improve it significantly].

We also identify optimal pallet patterns to allow for more cases to be handled and stored on each pallet. A typical example is going from 42 cases per pallet [7 cases X 6 layers] to 48 [8 cases X 6 layers]. A change like that improves both handling and storage efficiency by 14%. Sometimes clients have agreed to change unit counts per box from 20 units to 24 for example because of the identified efficiencies to be gained.

The right time to bring in CPD is before a case is developed since it is always more cumbersome to change something the market is already used to. However the usual situation is that CPD analyzes shipping cases long after they have been in use and the customer has incurred much unnecessary distribution expense. But better late than never.

All of the implementation suggestions made by CPD are worked through the client operations team – right back to the packing area - to insure functional success. And since all of the results are guaranteed to work they will be adjusted by CPD until the client agrees they achieve optimal performance in its system.