

**University of Nebraska  
Transportation Services  
Best Fit Vehicle Selection Process**

**CACUBO 2007 Best Practices Award Program  
A Proposal Submitted by Patrick Barrett  
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## **Abstract**

Transportation Services is a self-supporting department within the University of Nebraska – Lincoln’s Business and Finance division that seeks to provide quality vehicles and other automotive related services at economical pricing. As a result of significant increases in fuel costs, this department has explored a number of alternatives to address the needs of renting departments while giving a high degree of consideration to fuel economy and to what vehicle may provide the best fit for the intended departmental use.

This proposal describes four recent major changes that are scheduled to produce fuel cost savings, lower overall life cycle costs, and provide better service for departmental customers. Large utility vans used by maintenance personnel have been exchanged for PT Cruiser models with functional interior space and higher residual values. Mid-sized sedans have been replaced with subcompact cars in the intracampus courier fleet. Two changes in renting customers third-party vehicles for demand “spikes” have resulted in cost savings and more efficient rental processing.

The University of Nebraska – Lincoln is a member of the Association of American Universities, and recognized by the Carnegie Foundation as a Doctoral/Research Extensive university. In support of University research and education, Transportation Services is a self-supporting department within Business and Finance that seeks to provide quality vehicles and other automotive related services at economical pricing.

For the University of Nebraska as with most large fleets, the greatest expense is the depreciation of equipment, followed by fuel expense. After the cost of fuel reaches or exceeds \$3.00 per gallon, fuel becomes our greatest expense. Although we support the initiative to reduce imported energy with a switch to grain based fuels, we believe our state and the country are best served by reducing our consumption of fuel. To this end, maintenance of our vehicles is a high priority, and fuel conservation is stressed with all drivers.

### **Changing the selection process to attain fuel efficiency and fitness of purpose**

Traditionally, the fleet vehicle replacement process was apples for apples; e.g., sedans were replaced with sedans. Seeking to reduce our fuel consumption, and provide vehicles that better meet our customers' needs, we changed our fleet management style. A decision was made to properly size vehicles to meet our various customers' needs, and perform a life cycle cost analysis in the selection process.

Evaluation of the fleet pointed to a number vehicles that were not as efficient as similar vehicles used by other departments. One particular type of vehicle was found to be

extremely fuel inefficient, no matter how the vehicle was utilized. Utility vans used by maintenance crews in our Facilities area were averaging less than 10 miles per gallon. Visual inspection of several vans revealed that ½ or ¾ ton utility vans were being driven around empty, except for a small hand held tool box or a box of switches. Other vans were being used as motorized trash cans, loaded with used bolts, wire, conduit, or other obsolete parts.

A series of questions were developed to assist in the vehicle selection process. In meeting with management, we asked the following fitness-of-purpose questions:

How many people are you required to transport?

How many people normally ride in the vehicle?

What type of materials do you transport?

Are any of the materials or equipment temperature sensitive?

What areas on campus do they travel?

Are you limited in parking space?

Do you operate in adverse weather conditions and need improved traction?

What are your budget constraints?

In many applications, utility vans or pickups are exactly what is needed, but some applications required a utility vehicle which can transport up to 4 people. Materials are not large or heavy, but air-conditioning is required as small temperature sensitive equipment is regularly transported. Space and parking on campus is limited, so smaller vehicles are requested. In the winter months utility vans are useless on snow or ice, front

wheel or four-wheel drive would be a benefit. Finally, if the monthly charges could be reduced, it would be much easier to stay within budget.

Several vehicle types were evaluated and compact crossover utility vehicles were found to be lower cost with good EPA ratings, and high residual values. Based on the available crossover utility vehicles, bids were solicited for the Chrysler PT Cruiser and Chevrolet HHR. After a life cycle cost analysis was performed, the PT Cruiser was projected to cost less over the life of the vehicle than the HHR.<sup>1</sup>

The PT Cruiser vendor that was low bid was contacted about the availability of a demonstration model. A 2005 PT Cruiser was evaluated by the Director of Building Systems Maintenance and his first comment after seeing the vehicle was, “PT Cruisers, we can’t drive PT Cruisers. What will my boss say, what will the Vice Chancellor say?” In reply, we explained all of the positive aspects, air conditioning, fuel efficiency, versatile, good projected resale, and they would be “fun to drive”. The Director was sold on the idea, and took the PT Cruiser to show his boss, and eventually the Vice Chancellor. Upper administration initially reacted the same way the Director had, considering the PT Cruisers “cool cars”. To help build campus and public support, the University issued a press release on the PT Cruisers, prior to putting them out on the street.

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<sup>1</sup> Note: The Chevrolet HHR was a new model and there was no base residual value to use in the cost analysis, the residual for the PT Cruiser was used. The PT Cruiser is considered a compact sedan, but the dimensions and design are very similar to the HHR.

PT Cruisers have been successful in the fleet. Maintenance has reorganized their vehicle assignments to ensure that the PT Cruisers are utilized correctly. The only option we failed to identify or select was a roof rack. When we spec additional vehicles of this type, we will require a roof rack to transport the occasional light item that is over length for the interior. In five years, we will be selling 12 well-maintained PT Cruisers, with less than 20,000 miles of wear.

### **Different applications require different vehicles**

Evaluation of intermediate sedan usage revealed one specific department's fuel mileage was markedly low. University Courier Services delivers mailers and packages within a few hours of pickup from any on-campus department. These sedans were averaging less than 8 miles per gallon. We were also concerned with the damage caused by using sedans as cargo vehicles. Small parcels or boxes were damaging the interiors, and while loading the vehicle, the drivers were sliding boxes off the trunk lid or roof damaging the vehicles paint.

In this case, the vehicle selection process was initiated by reviewing vehicles with high city EPA rating, hatch back sedans or wagons were preferred to ease in loading/unloading packages, keyless entry was required to eliminate the need to place packages on the truck or roof while unlocking the vehicle, and maneuverability was evaluated for operating in areas with limited parking.

After evaluation of subcompact vehicles with city EPA ratings greater than or equal to 26 miles per gallon and completion of the life cycle cost analysis, three Chevrolet Aveo 5

door hatchbacks were ordered for use by Courier Services. Even though these vehicles are considered sub compact sedans, our tallest courier (6'5") is comfortable in these 5 star crash rated vehicles. The vehicles travel more easily around campus, are able to travel competently on ice or snow covered streets, and loading/unloading has been simplified.

### **Using private rental vehicles to meet short-term demand**

Daily and other short-term rental demand frequently exceeds our owned fleet vehicle inventory. By using private rental vehicles from Enterprise Rent-a-Car to meet these "spikes" in daily rental requests, we are able to meet the demand from our customers while avoiding the capital expense of purchasing additional vehicles. When demand exceeds availability, customers are offered Enterprise vehicles at our discounted corporate rate. Recently we set up a national account with Enterprise, allowing us to make reservations for customers anywhere in the nation where Enterprise operates. This guarantees us that 1) correct insurance coverage is selected, 2) lower contract pricing is utilized, 3) applicable taxes are avoided, and 4) the University receives the appropriate incentive through its p-card contract.

### **Using private rental vehicles to meet intermediate-term demand**

Our peak usage season is May through October. We have negotiated an agreement with a national leasing company that allows us to lease vehicles that are "off lease" from the company's other customers. Using these third-party owned sedans during our peak

season allows us to assign university owned vehicles to departments requesting long term assignments, and use the third-party sedans for our daily rental pool.

Based on our historical usage, the national leasing company vehicles will be used 18 to 21 days per month. Charging our customers the standard daily and mileage rates, we will cover the lease rate and the costs of operation. When the third-party vehicles are used more than 18 days in a month, the fees collected will help offset the administrative expense of this new program. This arrangement will be substantially lower in cost than the daily rental rate for sedans from Enterprise, and Enterprise will still be available to meet the spikes in intermediate-term requests, should they occur.

### **Conclusion**

By reexamining the criteria used for vehicle fleet renewals and replacements, the University Of Nebraska-Lincoln has met the programmatic needs of its campus customers while driving down the demand for fuel. Other CACUBO institutions would be well served to critically dissect their in-house transportation operations, choosing environmentally-friendly vehicle options where available to satisfy client expectations.