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SKILLS POOL REQUIREMENTS IN TRANSIT

## INTRODUCTION

The skills required by advanced technology-based industries are unforgivingly demanding. The transportation industry has an uneven track record in recruiting and, especially, using adequate skills. Aerospace primes and the “Big 3” automotive companies have long vied for the best and the brightest. At the other end of the spectrum, transit has made only sporadic efforts to keep up with the advancements in technology and as a result is lacking many of the skills needed to compete in the 21<sup>st</sup> century.

This report is based on facts reported in an article (“Ready to Roll”) published in the Sunday edition of the Chicago Tribune. The Analysis section is written by Arieli Associates.

## EXCERPTS FROM “READY TO ROLL”

### 1. Demand

In spite of the increase in old-line corporations laying off workers and dot-coms crashing, workers with a variety of technical skills are finding the job market a welcome haven.

Among the most receptive industries is transportation because of its increased dependence on more sophisticated technology. Ocean vessels, airplanes, trains, trucks, buses and cars all began incorporating the latest technology. As a result, transportation companies need more technical talent to do the work.

If you look at what's under the hood of a car, technology is much more powerful, and the talent supply is short.

### 2. Competition

Besides existing transportation companies creating demand, a host of new firms have been started because of technical advancements.

Transportation Techniques LLC in Denver is another new business. It designs, builds and services hybrid electric buses with an ultra-low emission. The pollution for the bus, which carries 116 passengers, is less than from a single passenger car. The first prototype was put into service in July 1999. There are now 11 in service and more to come, all designed to ease urban congestion and reduce fuel.

Competition has become keen for all the necessary workers, particularly those with degrees and work experience in engineering, computers, IT and math and sometimes business. Communication and people skills are also valued, particularly because a lot of work is done through outsourcing and partnerships.

### 3. Market

Searches for qualified applicants can sometimes take months. As a result, some companies have become publicity-shy about employees' skills for fear they'll be hired away. Yet others are confident they'll continue to be viewed as a place of choice to land. Such is the case with IBM's Denver global travel and transportation industry group. They would like to be seen as an innovative industry IT company that builds an e-business infrastructure to link all types of transportation businesses.

Beside cutting-edge work, employees also seek competitive salaries, benefits, stock options and greater challenges. The costs can be steep. Companies will get into a bidding war if necessary when the companies of potential recruits try to keep them. They have succeeded in 75 percent of cases because their pay exceeds the market and they offer good benefits.

### 4. Innovative Solutions

Some firms look for fresh talent by partnering with universities. Object Technology International, in Raleigh, N.C., a subsidiary of IBM Canada, recently announced support for a new automotive technology lab at North Carolina State University, which includes a vehicle cockpit lab, simulation lab and programming lab for engineering students. Students gain hands-on experience, and IBM gets a ready-made talent pool. Unisys Transportation alerts faculty at some schools of the skills it needs. If necessary, it will train faculty.

## ANALYSIS

Advanced technology is the only way companies (private or public) and government agencies can achieve sustained competitive advantage. Advanced technology deployment requires: strong in-house skills pool; forward-looking management; procurement policies that do not treat technology as a commodity; and, sophisticated supplier base. The in-house skills pool is by far the most important since it will precede and predetermine all the others.

The transit industry is today at a crossroad. Typically, it does not have a strong institutional technology background including the required skills pool. Before it can go out and try to hire talented new graduates, it must establish cores of professionals experienced in advanced technology deployment. To do that, it will have to compete for the limited pool of existing skills with the reinvigorated defense industry, the forward-looking automotive industry and the emerging new economy companies. New York, Chicago and Washington, DC transit agencies have just that in the last few years, establishing strong, seasoned Systems Engineering organizations reporting to the top.