function includes global inventory visibility, back-order capability and fulfillment, order-entry management, forecasting, cycle count and auditing, shipment management, rotable pool planning, and customs documentation. A planning solution system focusing on the unique complexities of company and customer needs is essential for inventory management and logistics. The system must optimize inventory based on service contracts and required response times, and it must have product-based forecasting capabilities utilizing product life curves. The inventory management system should also optimize placement of warehouses and stocking locations, and automate replenishment of parts. Companies such as Rolls Royce, National Semiconductor, and IBM have outsourced their inventory management and logistics operations to concentrate on their core competencies.

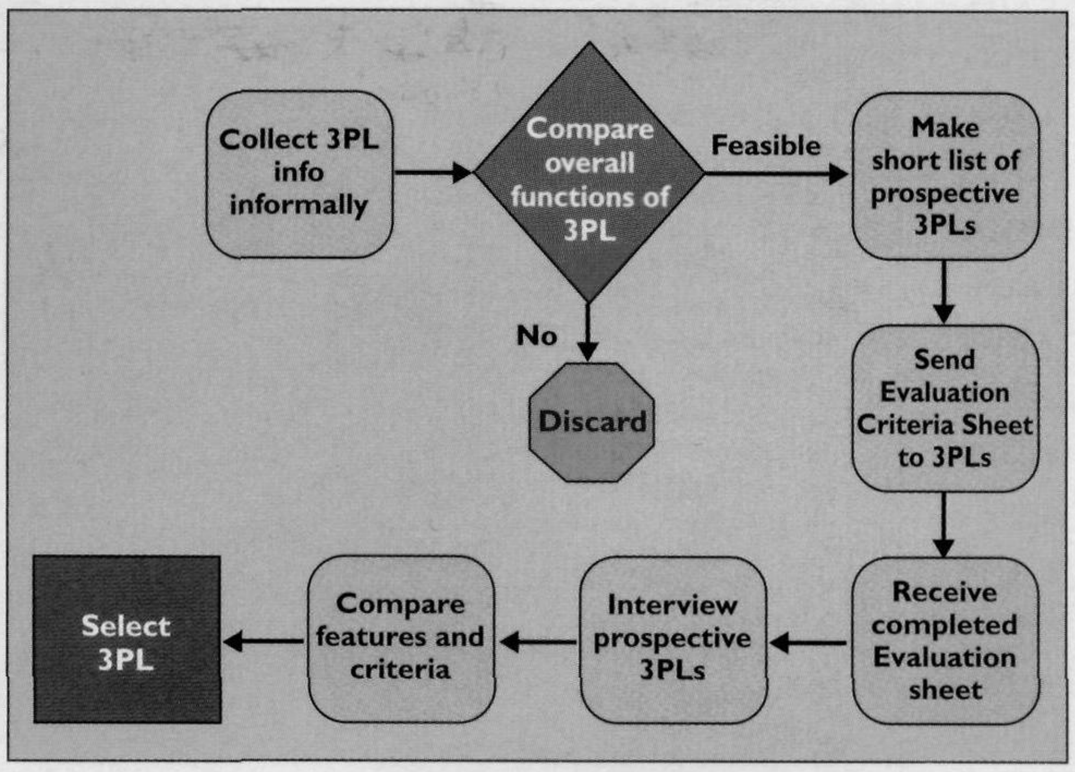

Figure 3. Evaluation process of 3PL.

Some may think logistics functions can be achieved by a supply chain management (SCM) solution, but many differences exist between service logistics and SCM, as illustrated in Table 1. A major difference is that a penalty for breech of service level agreement (SLA) usually enhances the performance of 3PL providers. Therefore, 3PL providers with SCM expertise and global trade expertise are much needed to provide strategic options and innovative solutions in the areas of logistics, inventory control, demand management to meet optimum allocation levels, multidirectional global transportation, and warehousing. Firms will gain competitive advantage if they fully understand the implications of SCM and tailor programs for customers. As e-commerce grows globally, the financial benefits of supply chain logistics leadership can be exponential.

Factors	Third-Party Logistics	Supply Chain Management
Goal	End User Satisfaction	Lower Inventory Levels
Demand Management	Just-in-case	Just-in-time
Flow of Links	Multiple directions	One way
Stocking Strategy	Highly distributed	Highly centralized
Transportation	Next day or Immediate	Freight
Penalty	Breech of Service Level Agreement	Out of stock

Table 1. Differences between 3PL and SCM

Global information flow. Information flow significantly enhances unit movement, as it helps determine how and when to move units most efficiently. 3PL providers are offering advanced IT and broader global coverage, enabling manufacturing and service industries to concentrate on their core competencies. Companies need a state-of-the-art 3PL provider with a wealth of IT deployment experience to achieve optimal information flow.

IT revolves around four major players: the 3PL customer, the customer's clients, the customer's suppliers and alliances, and the 3PL provider itself. Information flow begins with the 3PL customer. That information is analyzed by the 3PL provider, which dynamically changes the allocation levels at the appropriate warehouse locations globally. The analysis programs typically include software for dynamic material allocation, inventory control, supply chain management, logistics, transportation management, as well as intelligent decision-making algorithms. Each transaction is recorded in the customer system via electronic data interchange (EDI), among other methods. Many companies, including Cisco, Nike, and Ford, have outsourced IT services.

A 3PL Evaluation

Figure 3 describes a 3PL evaluation process, which includes a preliminary screening based on qualitative factors such as reputation. Depending on qualitative and feasibility factors, a short list of 3PL providers is obtained. An evaluation criterion is sent to the short-listed 3PL providers. After receiving the completed evaluation list, the prospective providers are interviewed. After the desired features and criteria are compared and analyzed, a 3PL provider is selected. This process has been tested in a Fortune 100 company and yielded good results. The basic process, as follows, was obtained from previous research [9].

Gathering 3PL information. A list of 3PL providers can be obtained from professional organizations. Google and Yahoo searches reveal about 430 logistics providers, of which roughly 75% are U.S.-based. Web