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PGL: THE ENTREPRENEUR IN CHINA'S LOGISTICS INDUSTRY

Introduction

"If the United States can ship their oranges and pears to everywhere in the world, why can't China do the same? China has a long history of fruit cultivation and a good quality of fruits. We can export our fruits worldwide. What will this depend on? It depends on an advanced logistics infrastructure and an advanced logistics management system in China."

- Mr. Liu Wu, President of PG Logistics Group Co., Ltd.

Mr. Liu Wu recalled a piece of recent news when he looked down towards the bustling crowd and the criss-cross traffic in downtown Guangzhou outside his office on the third floor of the PG Logistics (PGL) Building. In May 2004, the industrial and commercial sectors of South Korea established the Korea-China Retail and Logistics Committee under the auspices of the Korean Chamber of Industry and Commerce, for the purpose of promoting the development of the logistics industry between Korea and China. The Committee comprised 42 members from the industrial, commercial and academic sectors. Mr. Liu considered that foreign companies would play a proactive role in the development of China's logistics industry. He sensed that there would soon be consolidation and fierce competition in China's logistics market.

On Mr. Liu's desk was a construction proposal for the Company's logistics base. The Company was planning to build large logistics bases in 15 developed cities in China over the following five years. The Company had already constructed two logistics bases: one in Suzhou in the Yangtze River Delta and the other in Guangzhou in the Pearl River Delta. Given that the logistics industry was due to be opened up to foreign investors in 2005, Mr. Liu wondered whether the Company, at its current pace of development, would be able to

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compete with foreign enterprises. PGL was a privately owned business, and he was concerned that it might be at a disadvantage in terms of management and capital resources when compared with multinational corporations. Even when compared with the traditional State-owned enterprises, the asset value of the Company was small. What should PGL do in its next stage of development in the face of the imminent fierce competition? Should it develop on its own or join hands with State-owned enterprises or co-operate with foreign enterprises? What were PGL's strengths and weaknesses compared with its competitors?

The Logistics Industry in China

“China’s logistics industry is in its fledgling stage. We lag behind the developed countries in our management by 10 to 20 years. However, I am confident about the development prospects of China’s logistics industry, especially the development of privately owned logistics companies. State-owned enterprises have yet to change their mindset completely, and foreign logistics enterprises have to undergo an adaptation period after setting foot in the Chinese market. Meanwhile PGL can always meet the needs of customers and take the lead in the development of the Chinese logistics industry.”

- Mr. Liu Wu, President of PGL.

The Chinese term *Wu Liu*, meaning “flowing of goods”, or the English concept “logistics”, was first introduced into China from Japan in the early 1980s. After 20 years’ research and development, “logistics” had become a key component of the Chinese economy. The total value of goods transported in China surged from RMB3,000bn in 1991 to RMB23,300bn in 2002, an increase of 6.7 times and an average year-on-year increase of 20.4%, significantly higher than the 15.4% year-on-year rate of economic growth recorded during the same period. In 2003, the value of goods transported had reached RMB29,600bn. Of the goods transported, industrial products occupied the largest share and recorded the biggest growth. In 2003, they accounted for 84.6% of the total value of transported goods.¹ PRC freight mileage rose from 76bn tons/km in 1952 to 4,381bn tons/km in 2000. From 1982 to 2000, freight volume increased by 3.8 times.²

Following the opening up and development of the Chinese economy in recent years, there was now a drastic increase in the demand for professional or third-party logistics. As a result, a multitude of third-party logistics companies had mushroomed in the market, including: a) the long-standing PRC State-owned enterprises such as COSCO, SinoTrans, China Post and China Rail Express; b) multinational forwarders such as UPS, TNT and Maersk; and c) domestic companies in China such as PGL and Haier [see **Exhibit 1**].

The Development of PGL

The Predecessor

“PGL’s growth is attributable to the penetration of foreign-funded enterprises,” said Mr. Li Hengdi, Vice-President of PGL, sighing with emotion. In 1988, Procter & Gamble (P&G), the US consumer-product giant, set foot in the Chinese market with the establishment of a major production base in Guangdong. As a new entrant, P&G realised that its ability to grab

¹ http://news3.xinhuanet.com/fortune/2004-07/06/content_1578314.htm (accessed July 28th 2004).

² Luo & Findley (2002) *Logistics in China: Implications of Accession to the WTO*. [not clear: is this a book or a journal article or what? In the original, why is the year repeated at the end of the citation?]

a share in the China market hinged on its ability to deliver its Fast-Moving Consumer Goods (FMCG) everywhere in China in a prompt and timely manner.

At that time, still a foreigner to the “logistics” concept, Mr. Liu Wu contracted a freight-forwarding station in Guangzhou. Logistics at the time was limited to the dual functions of warehousing and transportation, which were handled by different business entities, meaning that a customer had to entrust its goods with different parties for warehousing and transport services. This was time-consuming, and cargoes could easily be left unattended and exposed to damage. Meanwhile, Mr. Liu’s forwarding station provided its customers with 24-hour, one-stop services by arranging both cargo storage and transport services. This was how P&G came to PGL.

P&G’s first order was to transport four containers from Guangzhou to Shanghai by train. P&G reaffirmed their standards and requirements clearly and repeatedly, while PGL carried out the assignment as meticulously as possible. The Company had to go through its operational procedures again and again, even though everyone was already very familiar with them. As freight trains did not operate according to a fixed schedule, PGL had to independently estimate the time needed for transportation. They worked out the arrival time of the goods based on the average running speed of the train, tracked the train’s movement one day in advance of their estimated time, and proceeded with loading and unloading accordingly. To ensure the timely arrival of P&G’s goods, Mr. Liu even flew to Shanghai to carry out checking and supervision personally. Although the first order did not generate any profit for his forwarding station, it was meant to be a test by P&G. PGL passed the test and secured P&G as its first multinational customer. P&G was able to rest assured because they knew their products were in good care throughout the whole process. In 1994, the PGL Guangzhou Warehousing and Transportation Company was established. From then on, P&G gradually increased its volume of transactions with PGL, and for a time even relied on PGL for all of its rail transport needs.

Internal Management Structure

“At the beginning, we had to conduct our internal management in strict compliance with P&G’s requirements. This explains why our branches were established before the head office. To meet P&G’s requirements, we set up four branches in Chengdu, Beijing, Shanghai and Guangzhou at that time.”

- Mr. Liu Wu, President of PGL.

PGL was a small set-up on inception, and it had to rent its fleet of trucks and warehouses. Under the auspices of P&G, and with its assistance, PGL began to build up its own logistics services regulatory system. In 1996, using the Good Manufacturing Practice (GMP, a quality management system promulgated by the US Food and Drug Administration) as a blueprint, and adhering to the 14 key requirements of GMP [see **Exhibit 2**], PGL formulated its own serialised quality management system and incorporated the specific standards and the permitted time for each key requirement into a “Quality Control Manual” for full implementation. At PGL’s head office, a quality control department was set up to implement the “Quality Control Manual”. Each and every operational procedure was subject to quality control and tracking from the very first step to ensure stability, consistency and reliability.³ For example, the moment an order was placed, there were specific rules for each staff member to follow: each staff member was required to document his work in writing for inspection by supervisors, and there were also clear-cut provisions on warehousing, transportation time and average damage rate.

³ <http://www.156net.com/Carry3/eg07.htm> (accessed July 28th 2004).

At first, PGL was unable to meet P&G's requirements all the time. P&G had to provide comprehensive training for PGL so as to raise its service standards. As a result, PGL formulated its Key Program Indicators (KPI) for the tracking and objective management of its service categories. Thanks to the GMP and KPI for ongoing service enhancement, PGL enjoyed an expanding customer base and a surge in orders. The number of its employees rose from 12 when it was first established to 498 in 1999 [see **Exhibit 3**]. Initially, PGL managed its branch companies mainly by telephone and facsimile. All orders and invoices from customers had to be confirmed by telephone or fax. Not only was this time-consuming, it was also difficult to ensure that information was communicated accurately between branch companies.

Over time, P&G became more demanding of PGL's services. P&G wanted to know the exact status of its goods, such as the present location, how many items were delivered to customers, the damage rate and so on. PGL had previously managed to meet all of P&G's demands, but now the information it fed to P&G was either inaccurate or not timely enough. As a result, P&G switched part of its orders to other companies, and the exclusive distribution contract for nationwide rail transport was about to expire. It was not until then that PGL realised the importance of an effective information management system.

Information Management System

"The application of information technology is a major factor for PGL to move on to what it is today."

- Mr. Li Hengdi, Vice-President of PGL.

"We adopt a two-pronged approach to developing our information system, through development on our own and purchase from external sources. Every step of our development aims to satisfy the demands of our customers and the needs of the enterprise instead of running after the fashionable."

- Mr. Richard Gu, Assistant to the Information Controller of PGL.

As P&G increased its requirements from punctual, accurate and reliable delivery to the provision of dynamic, accurate and timely information about the status of goods, inventory levels and damage rate, PGL realised that it was facing problems of low efficiency, high costs and inaccurate information. These problems were difficult to solve with manpower alone, and PGL started to invest in its information network technology [see **Exhibit 4**].

Generally speaking, a company had three options when introducing an IT system: first, it could outsource to a professional IT company for the development of a tailor-made system; second, it could develop its own system with the enterprise's in-house IT capacity; and third, it could purchase an off-the-shelf product to meet its IT needs. At that time, PGL was small in scale and limited in funds and IT expertise, so the second and third options were out of the question.

As a first step, PGL connected all its branch companies with Internet/Intranet to improve internal communication. Even the establishment of a simple Intranet was a substantial investment for PGL then. To computerise its entire operational procedures, the Company made a total investment of Rmb100,000 in hardware and Rmb100,000 in software. The hardware was installed internally while the software was contracted out. Thus PGL's IT system was finally launched, with both office automation and business flow computerisation in the head office, in all branches and over 40 operation points [see **Exhibit 5**]. Online real-time tracking of key logistics information about warehousing and transport were also made available. Despite the successful establishment of the IT system, many staff members were

emotionally resistant to the system because of they were unfamiliar with it. They still clung to their manual approach. Mr. Liu saw the problem and arranged a training seminar for his staff. At the seminar, he related his own experience: "I used to know little about computers, but now I log in every day to check out new knowledge and information. It is up to you whether you should learn something new."

Gradually the staff became familiar with the system and even offered many suggestions for improvement. One of the suggestions was that they wanted the system to produce automated reports for their work functions. As the existing system required multiple steps to achieve the desired result, PGL developed its own system for generating automatic reports. After PGL's information system started operations in May 1998, PGL's business turnover increased by 40%, its operation points doubled, the number of customers increased four times and the level of customer satisfaction increased. The use of IT became one of PGL's strong selling points. After P&G, Philips became another of PGL's major customers thanks to the Company's use of computer-aided methods such as database and network transmission to verify, categorise and collate information.

In 1999, PGL Warehousing and Transportation Company was renamed the PGL Logistics Group. At the next stage, the Company's strategy aimed at strengthening its marketing efforts to attract more customers and increasing the compatibility with customers' IT systems in order to raise its service standard. In 2000, PGL established a VPN-based eXchange Data Interface (XDI) and adopted XML technology to further enhance electronic data interchange with customers. This was designed to enable a seamless exchange and connection with customer data and, in turn, provide tailor-made logistics information for individual customers.

After 2002, PGL aimed to transform itself from a mere third-party logistics company into a one-stop solution provider and executor of supply chain and logistics services. In 2003, PGL started developing the Total Order Management (TOM) system on its own to support the entire order flow, and to attain an order-based, highly efficient and close-ended management system. In the same year, PGL collaborated with IBM to introduce the Warehouse Management System (WMS).

The implementation of PGL's IT system was not entirely smooth sailing. As Mr. Richard Gu pointed out:

"In fact, PGL attempted to install a system like TQM in 1999. However, the system eventually failed because none of the departments needed this and there was also a problem with technology selection. In selecting a supplier for the WMS system, we picked the one who offered the most reasonable price but eventually found that the supplier could not live up to our expectation in system implementation. We went down not a few crooked roads."

The goal of PGL's information management system was to implement the ERP system across the Company from 2004 to 2006 onwards. To cope with this project implementation, PGL's IT department had also grown from four members in 2000 to 17 in 2004. By 2004 they were responsible not only for performing in-house system development and maintenance, but also for helping customers that were relatively weak in IT capability to build up their own information systems. Despite the heavy workload, Mr. Richard Gu admitted that a team of 17 was already sizeable and that further expansion would probably pose management difficulties.

Customer Service Orientation

“We provide door-to-door services for our customers. All our branch companies do the same to ensure the prompt delivery and proper receipt of the goods. We assess the performance of our branches on the basis of the KPI. In 2003, our inventory accuracy rate was 100%, our customer satisfaction rate 96%, and our damage rate as low as 0.012%.”

- Mr. Li Hengdi, Vice-President of PGL.

The professional services rendered by PGL, especially its low damage rate, have contributed greatly to the Chinese companies' efforts in cutting the overall costs of logistics. Damage rate was a particularly important factor in the logistics industry. In respect of Fast Moving Consumer Goods, the average damage rate in China was 5%, but in developed countries it was “far below 1%”.⁴

With regards to systems integration, PGL was able to offer a variety of solutions as the Company's IT department continued to gain valuable experience in the ongoing development and perfection of its information system. For customers that were weak in IT, PGL would be asked to help them set up their own information systems. For customers with strong IT capabilities, PGL would develop a set of tailor-made software for data exchange. In other instances, customers would grant PGL limited access to their terminal systems, in which case PGL would function as a systems operator.

Currently, PGL had more than 80 customers, most of which were multinational companies [see **Exhibit 6**]. Few domestic companies, on the other hand, had realised the importance of logistics, as indicated by a survey by China Storage Association, showing that about 50% of the Chinese companies considered that the influence of logistics on their operation was limited.⁵ Meanwhile, the majority of the companies surveyed had their own transport and warehousing departments. According to an investigation carried out by the China Storage Association in 2001, third-party logistics companies dealt with just 18% of the incoming goods for transportation. As to outgoing goods for transportation, 59.8% was jointly dealt with by third-party logistics companies, while only 16.1% was dealt with by a single third party on its own.⁶

The Future of PGL

“Regarding our future development, we will continue to enlarge our logistics base, integrate both the upstream and downstream resources, and establish a platform for sharing these resources.”

- Mr. Liu Wu, President of PGL.

Following the commercial operation of the Suzhou international logistics base (serving the Shanghai Municipality and neighbouring provinces, including Anhui, Jiangsu and Zhejiang) in 2002, PGL's integrated logistics base at Huangpu District in Guangzhou (serving Guangzhou and nearby cities, including Shenzhen) was also put into use in June 2003 upon completion of Phase 1 of its construction. PGL planned to set up as many as 15 logistics bases in 15 developed cities around the country [see **Exhibit 7**]. The Company started its

⁴www.eiu.com China hand Dec. 1999 (accessed July 28th 2004).

⁵ Investigation Report 2001, by the China Storage Association, “Report on China's Industry Development – Logistics Report 2003” <http://gov.finance.sina.com.cn/zsyzy/2004-06-28/13136.html> (accessed July 28th 2004).

⁶ Luo & Findley (2002) *Logistics in China: Implications of Accession to the WTO*.

business in rail transport, and by early 2004, after years of development, 90% of its business came from road transport, while rail and sea transport accounted for 8% and 2% respectively.⁷ In terms of the composition of its fleet, PGL owned over 40 trucks for regional delivery in South China, and chartered trucks for thoroughfare transport and distribution in other parts of the country.

Meanwhile, the Chinese government had attached great importance to the development of logistics. In its Tenth Five-Year plan, the Government stated that China would “develop a service sector that meets the needs of the production industry and introduce new business models and technologies, by promoting chain operation, logistics distribution, agency system and multi-modal transportation that aim at reforming and upgrading the traditional circulation industry, transport industry and postal services.”⁸

The logistics industry in China was at a fledgling stage, with a highly fragmented market. It was reported that third-party logistics in China accounted for only 2% of the total goods transported in China in 2001, much lower than the US (8%) and Europe (10%).⁹ As competition intensified and the logistics industry underwent consolidation, more and more Chinese companies began to meet the service standards set by multinational companies. Now PGL was facing an increasing number of competitors in various regions. Domestically, initiating price wars was a favourite tactic employed by most Chinese companies, and it was likely that this would hamper PGL's profitability in the long run [see **Exhibit 1**]. In addition to competition from State-owned enterprises with abundant assets and extensive networks, and from local privately owned companies with flexible operations, PGL also had to compete with the well-managed, cash-rich international conglomerates. Given such keen competition, how could the Company attract and retain its customers without compromising the profitability it needed to fuel its ongoing development? PGL's growth was attributed to the businesses from multinational companies. As the global logistics partners of these multinational customers set foot in the China market, how could PGL retain these foreign customers and simultaneously recruit more domestic customers? Now that the Company had put in place an advanced information management system and a comprehensive logistics infrastructure for future development, what should its next sensible move be?

⁷ Of the road transport, highway transport accounted for 32%, regional distribution 47% and municipal distribution 32%.

⁸ <http://www.space.cetin.net.cn/docs/mp0102/mp010217.htm> (accessed July 28th 2004).

⁹ Ho, H., & Lim, C. (2001) “China Logistics”, *Morgan Stanley Equity Research Asia Pacific*, October 5th 2001.

EXHIBIT 1: MAJOR LOGISTICS COMPANIES IN CHINA

NAMES		Summary
State-owned enterprises	China Rail Express	<ol style="list-style-type: none"> 1. Mainly providing passenger and cargo transport by train; also providing nationwide, network-based & door-to-door courier delivery service; branch organisations in 200 cities and 1,000 vehicles; taking up 1/6 of the market share in domestic postal and package delivery 2. Rail transport; express courier service 3. Principal location of business: China
	China Merchants	<ol style="list-style-type: none"> 1. Substantial assets, including three major ports in the western harbour district of Shenzhen, 41 ships and 300 vehicles; over 30 subsidiaries and branches. 2. Sea and road transport 3. Principal location of business: International
	China Post	<ol style="list-style-type: none"> 1. Strong network built on its post offices throughout the country; operating in 2,000 cities; accounting for 50% of the domestic courier service sector;¹⁰ 2. Mainly via road transport; express postal service 3. Principal location of business: China
	COSCO	<ol style="list-style-type: none"> 1. A multinational corporation with 600 modernised merchant ships of around 3000 deadweight tons, which annual volume of over 200 million tons. As a global corporation focusing on shipping and logistics, COSCO employs about 70,000 staff members in nearly 1,000 member companies all over the world. 2. Mainly via sea transport; Ship agency; Containers 3. Principal location of business: International
International companies	UPS	<ol style="list-style-type: none"> 1. UPS operates 6 cargo flights per week between Shanghai and the US. On this basis, the company plans to increase the number of cargo flights to 12, and plans to set up a transshipment centre in Shanghai in 2007. Its PRC export volume posted a 60% surge in the first quarter of 2004, and 70% in the second quarter compared with the same period in 2003. 2. Air freight; express delivery
	Fedex	<ol style="list-style-type: none"> 1. Fedex plans to expand its PRC coverage by 100 cities and establish an operations centre in China. China is the fastest growing market in Fedex's global courier business. In the second quarter 2004, Fedex's China business recorded 50% growth in volume and a 47% growth in net profit compared with the same period in 2003. 2. Air freight; express delivery
	APL	<ol style="list-style-type: none"> 1. 39 branches and offices in China, with over 40% of its annual turnover from the Greater China Region (mainland China, Taiwan and Hong Kong) 2. Shipping; container
	DHL	<ol style="list-style-type: none"> 1. Over 4,700 staff members in 225 offices throughout China, along with four port operation centres, 1,100 operation vehicles and service coverage in 318 cities. In China, DHL is about to set up its third Express Logistics Centre (ELC) and sixth Strategic Parts Centres (SPC). DHL has almost 40% of the market share in China's express delivery. 2. Shipping, land transport, air freight; express delivery
	TNT	<ol style="list-style-type: none"> 1. Service coverage exceeding 2,000 locations in more than 200 cities in China 2. Land transport, air freight 3. Express delivery
New entrants in China	Haier	<ol style="list-style-type: none"> 1. Built on Haier's internal logistics structure; 16,000 trucks and 42 large regional distribution centres 2. Motor transport

Sources: <http://www.cre.cn>; <http://www.ems.com.cn>; <http://www.cosco.com.cn>; <http://www.chinamerchants-logistics.com>; <http://www.haier.com>; <http://www.cn.dhl.com>; <http://www.tnt.com> (accessed July 28th 2004).

EXHIBIT 2: PGL: GMP MANAGEMENT ELEMENTS

Key Elements	Description
KE1	Leadership
KE2	Training
KE3	Design, Construction & Installation
KE4	Formula cards, Specifications & Standards
KE5	Written Procedures
KE6	Validity Authentication
KE7	Hygiene, Pest control, Sterilisation & Maintenance
KE8	Storage & Management of Finished Products
KE9	Distribution & Control of Semi- & Finished Goods
KE10	Recording
KE11	Self-improvement system
KE12	Complaints
KE13	Tracking & Enhancement of Quality System Outcome
KE14	Obligations of Contactors

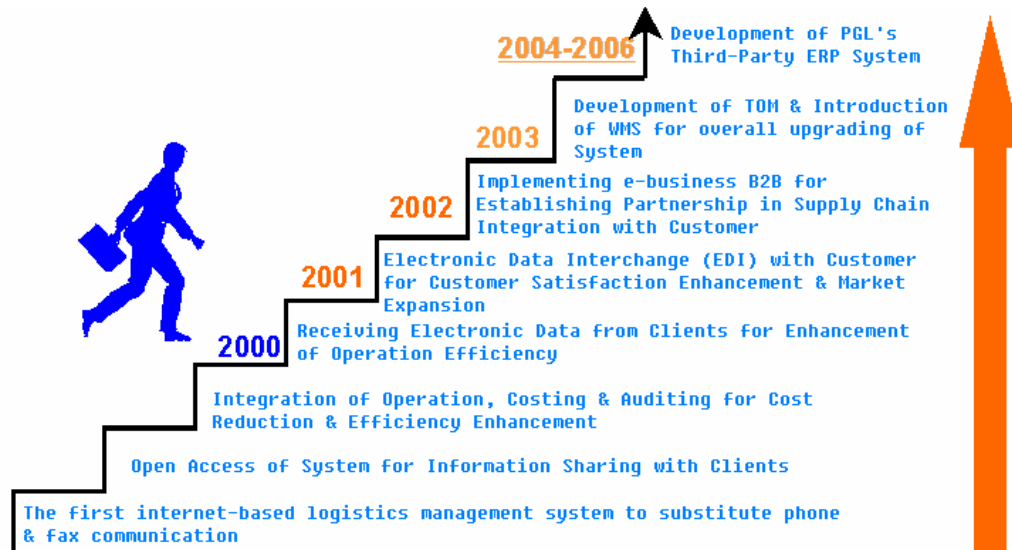
Source: PGL.

EXHIBIT 3: PGL: PHASES OF DEVELOPMENT

Year	Name	Scale	Business(es)	Major Customers
1994	PGL Storage & Transport Co.	No of staff: 12; Registered Capital: 1m	Warehousing & transporting	P&G
1999	PGL Logistics Group Co., Ltd.	No of staff: 498; Registered Capital: 70m	Third-party logistics services	P&G, Philips, etc
2004	PGL Logistics Group Co., Ltd.	No of staff: 1,105; Registered Capital: \$130m [specify currency]	Professional third-party logistics services, including consultancy planning, operation management & data processing and analysis for logistics operation	Over 40 multinational enterprises

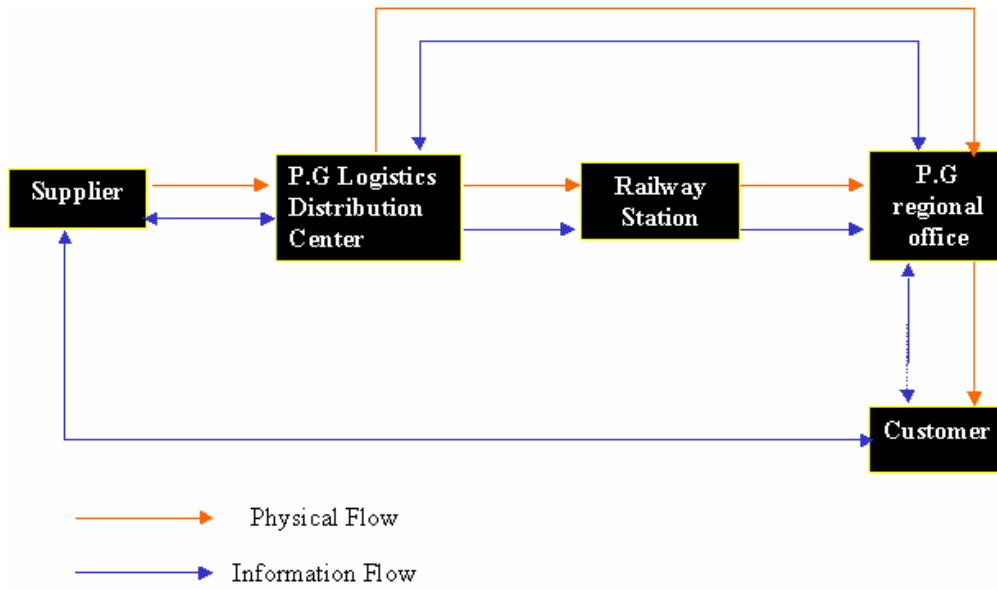
Source: PGL.

EXHIBIT 4: PGL: DEVELOPMENT OF THE I.T. SYSTEM



Source: PGL.

EXHIBIT 5: PGL: LOGISTICS WORKFLOW



Source: PGL.

EXHIBIT 6: PGL'S MAJOR CUSTOMERS



Source: PGL.

EXHIBIT 7: PGL'S LOGISTICS NETWORK IN CHINA



Source: PGL.