

CHAPTER 3: ANALYSIS OF THE COMPANY

3.1 Product Range

Changing markets are creating new challenges. Power producers worldwide are taking a bold new look at the way they do business. In today's market-driven economy, issues like privatization and deregulation have created a competitive, quickly changing business environment that poses new challenges for everyone involved.

Markets that were strongly technology-driven in the past are now increasingly sensitive to market forces. As a result, low power generation cost is quickly becoming the most important factor for success among power producers. Reliable planning, expedited licensing and approval as well as quick project implementation are absolutely essential to ensure a project's success. In a dynamic global market, power producers need a high-value solution, which fits their individual requirements and allows them to amortize their initial investment quickly. A solution that continually provides efficient, reliable operation with low maintenance requirements for an attractive return throughout the plant's life cycle.

Siemens offer a range of flexible solutions to fit customer's needs, from an EconoPac, Power island through to a turnkey plant with a variety of options.

3.1.1 EconoPac

- Base building block:
- Gas turbine
- Generator and exciter
- Starting package
- Mechanical and electrical package
- Control system
- Inlet air system

- Exhaust system
- Fuel systems

3.1.2 Power island

- Optimized thermal cycle including:
- HRSG
- Steam turbine-generator, exciter and auxiliaries
- Main pumps
- Condenser
- Critical valve

3.1.3 Turnkey plant in base design

- Complete turnkey EPC plant including :
- Complete piping
- All pumps
- Cooling towers
- Main machine transformers
- Plant control system
- Medium-voltage switchgear
- Auxiliary transformer
- Generator circuit breaker
- Civil works

3.1.4 Further Add-ons

Choose additionally from Siemens' pre-packaged options to meet specific requirements.

- a. **Site-specific options (a selection):**
- Gas reducing or compressing station
- Hybrid cooling towers, once-through cooling

- Raw-water storage tank
 - Water treatment system
 - Water injection for operation on fuel oil
 - Anti-icing, evaporative cooling or pulsed filter for air-intake system
 - Nox reducing system (SCR)
 - Fire pump system
 - High voltage switchgear
 - Additional sound control measures
- b. Customer-specific options (a selection):**
- Dual-fuel capability
 - Permanently installed crane (for major inspection and/or installation work)
 - Turbine building
 - Combined control room, admin, workshop and storage building
 - Water chemistry laboratory
 - Vertical heat-recovery steam generator (natural or forced circulation system)
 - Condensate polishing plant
 - Bypass deaerator
 - Redundancies for condensate, feedwater and circulating-water pumps
 - Bypass stack for multi-shaft plant
 - Black start diesel unit

Some of the benefits Siemens pre-engineered options offer:

- Enhanced operational flexibility: for example, quicker start-ups by using a bypass deaerator and auxiliary steam generator.
- Easier maintenance: for example, the turbine building with its high-load crane reduces the time required for major inspections.
- The plant can be optimally configured for local climatic conditions and infrastructure: for example, using freshwater or an air condenser for cooling instead of wet-cell cooling towers.

(Siemens Corporate Brochure supplied by the Corporate Communications Dept)

3.2 Pricing Strategy

First of all the pricing is based on Client Minimum Function Specification (MFS). MFS provides the technical detail of the system required by the Client (either Public Utility or IPP). All the power developers then submit their price for the project. The project price consists of the following items:

1. Software costs – This cost is mainly for the design works (manpower for technical staff, paper cost and technical Admin. staff)
- 1 Hardware cost – This cost is mainly for the construction of the power plant (cost included are material cost, manpower for supervision staff and Site Admin. cost)
- 2 Project Management – This cost mainly include Project Management admin. cost such as paper, staff, telephone and electricity.

The above mentioned cost varies from country to country due to the following reasons :

1. The availability of local technical staff for the software works.
2. The availability of local material for the construction.
3. The current local salary structure.
4. The tax or other local payment requirement that could influence the final price.

A part from the MFS, the developer propose alternative proposal that could influence the selection of developer by the power operator. The alternative proposal is based mainly on:

1. Better equipments that would give higher plant efficiency.
2. Provide training for the Client to operate the plant (mainly for IPP).
3. Secure financing for the Client.

3.3 Siemens Power Generation Asia Pacific Sdn. Bhd. KWU's Presence in Malaysia

From Table 1, we see that Siemen's power-plant generation in Malaysia (1997), was represented by the sales of 14 units of Gas turbines represented by 23% of market share and 1606 megawatts supplied, representing 22.6% market share.

As for the Steam turbines, Siemens sold 6 units represented by 22.20% market share and 648 megawatts supplied representing 13.8% market share.

Table 1: Siemens Power Generation Asia-Pacific Sdn. Bhd. KWU's Presence in Malaysia (1997)

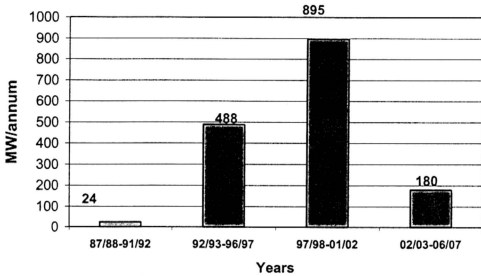
	Units	Market Share (%)	Megawatt	Market Share (%)
Gas Turbine	14	23	1606	22.6
Steam Turbine	6	22.20	648	13.8

(KWU Sales Department)

Siemens market data for Megawatts supplied by Steam turbines in total is shown in Figure 1. For the period of 1987/88 – 91/92, 24 megawatts per annum was supplied. As for the duration of 92/93 – 96/97, 488 megawatts per annum was supplied by Siemens.

For the period from 97/98 – 2001/02, this is represented by a forecasted sales projection of 895 megawatts per annum. For the duration of 2002/03 – 06/07, this is represented by a forecasted sales projection of 180 megawatts per annum.

Figure 1: Market Data for Steam Turbines in Total

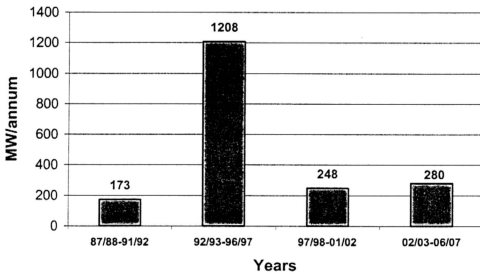


(KWU Sales Department)

Siemens market data for Gas turbines is described in Figure 2.

173 megawatts per annum was supplied in the period 1987/88 – 1991/92. For the duration of 1992/93 –1996/97, 1208 megawatts per annum was supplied by Siemens.

Figure 2: Market Data for Gas Turbines in Total

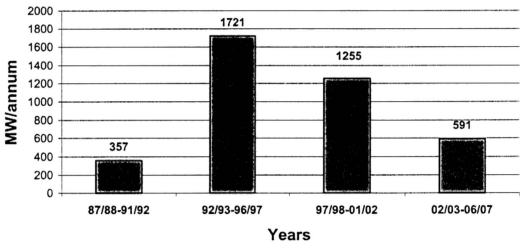


(KWU Sales Department)

For the period from 1997/98 – 2001/02, this is represented by a forecasted sales projection of 248 megawatts per annum. For the duration of 2002/03 – 06/07, this is represented by a forecasted sales projection of 280 megawatts per annum.

From Figure 3, we see that Siemens market data for the total order volume was described. This includes the sales of Steam turbines power plants, Gas turbines power plants, and Hydro power plants. For the period of 1987/88 – 1991/92, 357 megawatts per annum was supplied. For the duration 1992/93 – 1996/97, Siemens supplied 1721 megawatts per annum.

Figure 3: Market Data for Total Order Volume



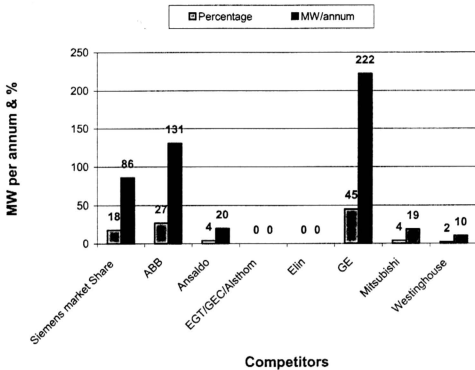
(KWU Sales Department)

For the period from 97/98 – 2001/02, this is represented by a forecasted sales projection of 1255 megawatts per annum. For the duration of 2002/03 – 06/07, this is represented by a forecasted sales projection of 591 megawatts per annum.

From Figure 4, Siemens and their Competitors profile was mentioned, where market shares for the past 5 years, from 1992/93 – 96/97 for Steam turbines power plants were described. It can be seen from Figure 4, General Electric (GE), was number one market leader with a market share of 45% and 222

megawatts per annum supplied. Number two market player was represented by ABB with a market share of 27% and 131 megawatts per annum supplied.

Figure 4: Market Share for the past 5 years 92/93-96/97 (New Project Management) for Steam Turbine in Malaysia



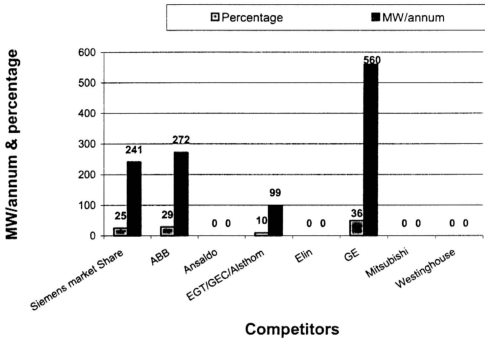
(KWU Sales Department)

Number three market player was represented by Siemens with a market share of 18% and 86 megawatts per annum supplied. Number four market player was represented by Ansaldo with a market share of 4% and 20 megawatts per annum supplied. Fifth market player was represented by Mitsubishi with a market share of 4% and 19 megawatts per annum supplied. Sixth market player was represented by Westinghouse with a market share of 2% and 10 megawatts per annum supplied.

Siemens and their competitors market shares profile for the period of 1992/93 – 96/97 for Gas turbines power plants is described in Figure 5. The market leader was General Electric(GE), represented by 36% market share and 560 megawatts per annum. It was followed by ABB with a market share of 29%

and 272 megawatts per annum. The player with the third largest market share was represented by Siemens with 25% market share and 241 megawatts per annum. Lastly, EGT/GEC/Alstom was represented by a market share of 10% and 99 megawatts per annum.

Figure 5: Market Share for the past 5 years 92/93-96/97 (New Project Management) for Gas Turbine



(KWU Sales Department)

The forecasted sales projection figures for the period of 1998 – 2001/02 and 2002/03 – 06/07 are unavailable, so no interpretations can be made.

3.4 Siemens Procurement and Logistic Services (SPLS)

Siemens Procurement and Logistic Services (SPLS) is a worldwide service provider in this field.

Companies having to complete on a global scale can often no longer survive without worldwide purchasing and logistics know-how. The need to optimize innovative capabilities and the quality of products and services while at the

same time constantly reducing costs calls for experts with specialist knowledge of all the major purchasing and innovation markets.

More Siemens divisions and regions as well as external customers are recognizing that they can focus more fully on their core competence areas if they outsource purchasing and logistics. This is why SPLS has made it its business to offer comprehensive 102 to both internal and external customers. Their business unit, as an increasingly important field of activity within Siemens group, thus enhance the Siemens portfolio of services.

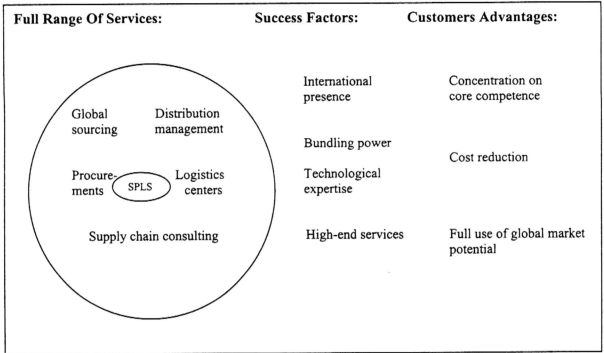
3.4.1 SPLS Facts and Figures

- Sales 99/00:
 - 700m euros (the No. 7 Siemens service provider)
- Volume handled:
 - 1.7bn euros (purchasing)
 - 5.6bn euros (logistics)
- Organization:
 - 22 sites in 10 countries, 510 employees worldwide

After just one year in operation, SPLS already counts among the Top 10 internal Siemens service providers with a purchasing volume of some 1.7bn euros and a logistics volume handled of approx. 5.6bn euros. Internal- and with increasing frequency also external – customers are making use of their global network, with branch offices in Germany, Eastern Europe, Israel, Asia and North America, to carry out purchasing and logistics projects.

SPLS provides comprehensive procurement and logistics services, which sharpen their customers' competitive edge in the marketplace.

Figure 6: Range of Services provided by SPLS



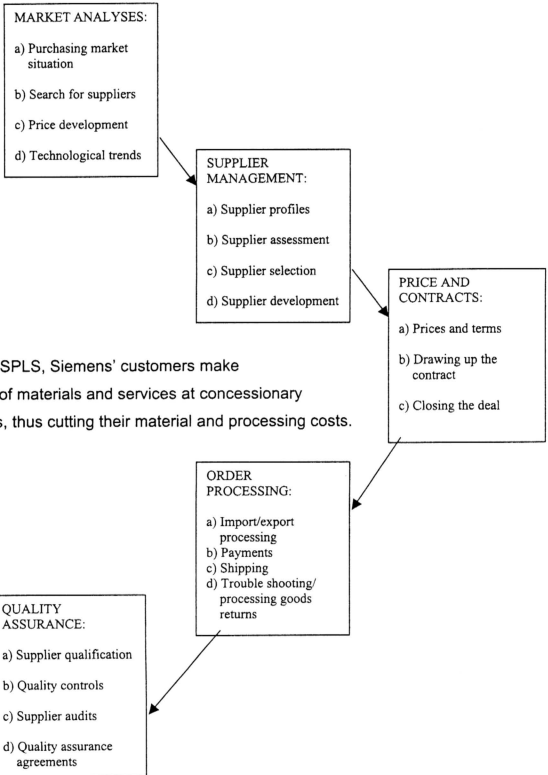
Their value-added and solution-oriented range of services covers global sourcing, e-procurement, delivery control, logistics solutions and supply chain consulting. With this portfolio, the primarily offer to their customers a sound service foundation on which to build their own sourcing and logistics strengths as well as taking advantage of long term potential.

According to an international logistics survey conducted in 1999, companies based in Europe and North America are increasing availing themselves of material, products and services on international markets (currently already approx. 65%). If a company is to strategically successful, therefore, it is becoming ever more important to find reasonably priced sources on the global market.

Siemens offer a full service, particularly for companies wishing to increase their market transparency and take advantage of worldwide price advantages without running an international procurement organization of their own. From analysis of purchasing market, quality controls down to commercial

processing, Siemens take care of every facet of professional sourcing management.

Figure 7: SPLS takes care of the entire purchasing process for its customers



With SPLS, Siemens' customers make sure of materials and services at concessionary terms, thus cutting their material and processing costs.

SPLS customers profit not only by making the most of procurement potential on the market world. The worldwide local presence of Siemens employees simplifies the entire procurement process and assures their customers reliable market information, products and innovations. (SPLS Brochure supplied by the Corporate Communications Dept)

3.4.2 Enterprises Use Strategic Purchasing Solutions To Launch Price Offensive

Certain much – used business materials and services, such as office supplies and furniture, can be procured far more efficiently and cheaply with a little help from Siemens. They appraise the situation at their customers' premises systematically in order to assess what is required. Then Siemens will bundle demand and establish partnerships with preferred supplies so that prices stay low in the longer term.

In addition, Siemens also does all the negotiating and drawing – up of framework agreements as well as controlling. This ensures the necessary legal security for their customers and guarantees the continued realization of potential savings. Naturally, Siemens also take care of the logistical and commercial processing of strategic purchases of semiprecious and precious metals for their customers.

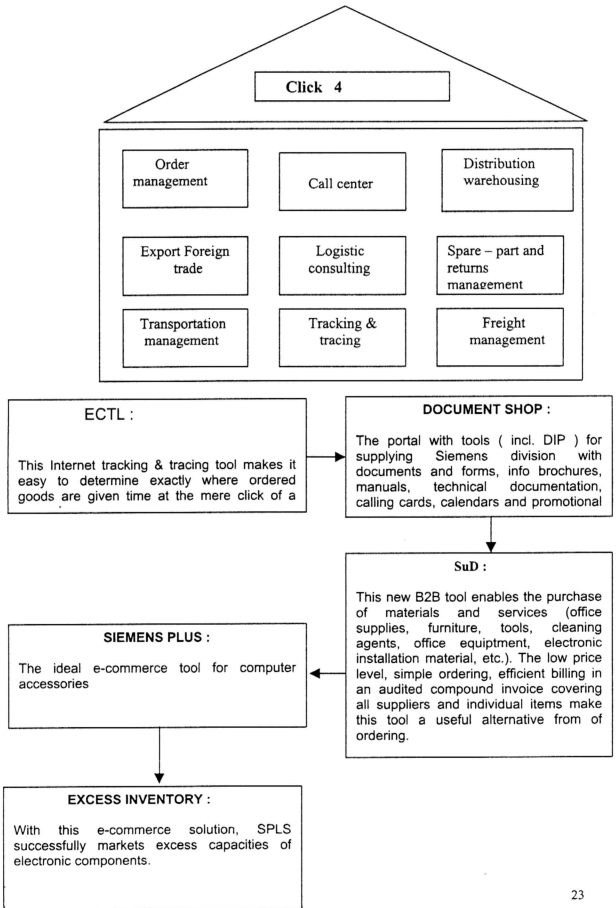
While brake blocks, mounting material or office furniture have hitherto largely been ordered by fax or mail, businesses are increasingly obtaining their supplies on virtual marketplaces. As this enables them to speed up processes and cut costs, the volume of B2B transactions via the World Wide Web is rapidly increasing. At the same time, the critical stage in the race for B2B standards is now beginning as the supplier marketplace recently set up on the Internet by the automotive giants GM, Ford and Daimler Chrysler shows. SPLS is rising to these challenges and offering their customers a system of Internet-based purchasing tools. With “click to procure” and “SiemensPlus”, users can cut their process cost by purchasing from a catalogue of materials, services and data-processing accessories and benefit

from the speed of the electronic procurement process. Siemens will take care of everything else, all the way down to compiling a single invoice to the user for all purchases made. This means time, expense and work savings for their customers who can also buy in all the usual overhead materials at lower prices, due to Siemens' global experience and supplier partnerships. As a result, the cost of a single order process can be cut by up to 60%, depending on the value-added level of the order chain. SPLS is currently developing a new branch of e-commerce, "Excess Inventory", for the professional marketing of excess capacities of electronic components. Here, SPLS first of all appraises the entire logistics process, from taking stocks and advertising for bids, commercial and logistical processing down to the recycling of unsold parts. This and other e-commerce applications are integrated under the SPLS brand umbrella "click 2 procure". In addition, under the name "click 4 logistics", SPLS is positioning itself as a competent logistic partner for existing portal solutions, solving their customers' specific and logistical customers.

Carrying a pile of paper from one room to the next is far from being logistical work. Yet if the final destination is not the room next door, but the rainforest of Central Sumatra and if we are not talking about a few sheets of paper but the largest pulp factory in the world, then full and punctual delivery is a logistical performance.

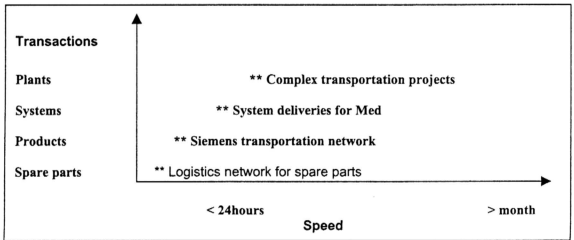
This logistical task of supply chain control, a "classic" for SPLS, covers ordering goods, controls of all service providers, export documentation, shipping coordination and the continual preparation of status reports for clients. In order to be able to cope with these transportation tasks, SPLS runs a worldwide transportation network (STN) with optimized distribution zones and accurate world timetables that take 60,000 consignments to their destination.

Figure 8: SPLS provides modular logistics building blocks for e-commerce marketplaces.



The services rendered as part of the supply chain control package also includes electronic processing and control by merchandise movement control system. Where freight can be bundled, the cost benefits are even greater. In addition, Siemens have developed for their customers an array of innovative, fast, cost-efficient and flexible services to facilitate foreign trade, distribution logistics, spare part and express logistics as well as disposal and recycling. After all, flexibility and the ability to adapt to change while maintaining stable performance are the key customer benefits offered by professional logistics. This also includes unbroken tracking goods and information flows, a particularly necessary feature in spare-parts and express logistics as customers demand full and punctual shipping, sometimes within tight time windows.

Figure 9: SPS controls global flows of goods and information



Delivery time is increasingly becoming an indicator of a company's competitive performance. To customers, the assurance of shortest possible delivery time is often a crucial purchasing factor. If the delivery time is observed or even undercut, this greatly influences the customer satisfaction and the image of the seller. New logistical solutions capable of effectively reducing delivery times thus contribute toward the customer satisfaction and success, the SPS logistics centers in Augsburg (LCA) and Furth (LZF) play a vital role in reaching their logistical targets. The specific Siemens know-how

and knowledge of the business process as well as of organizational and decision making structures at LZF make Furth a top address for logistical solutions for documents, brochures, manuals, technical documentation, form, etc., from a minimum shipment of one up. A new component is the implementation of customized e-commerce applications and the subsequent logistics including for example document and media management.

Service profile for the SPLS logistics center (LCA), Augsburg

- Control of complex delivery processes
- Spare-parts and express logistics
- Administration of inventories
- Operational processing of imports/exports
- Value-added services
- Recycling and disposal logistics
- Logistics volume: 420m euros
- 110,000 annual goods receipts
- Volume recycled: 1,200t

Service profile of the SPLS logistics center (LZF), Furth

- Warehousing
- Export processing
- Packaging
- Handling of minimum volumes
- Express logistics
- Worldwide delivery to any location
- Electronic document services (documents and form retrievable via PC and SCF from every LZF customer)
- 49,000 articles in stock
- 4,000 consignments/day (870,000 p.a.)

LCA in Augsburg is the competent center for spare part and express logistics, for operational processing and import/export support for electronic and technical merchandise. Whether mainframe computers, filing systems,

storage systems, monitors, switchboards, control equipment for traffic lights, parking ticket machines or electronic components, LCA offers comprehensive logistical capabilities for them all, right down to professional recycling and disposal.

In future, competition will not take place between companies but between supply chains. Logistics is increasingly becoming a deciding factor in the contest for customer satisfaction. Now that product quality is no longer a distinguishing feature (no one can afford to produce poor quality!), the ability to supply the products at the appointed time is paramount. This fact makes different demands on corporate purchasing departments. Whereas, expense was once the chief criterion in choosing a supplier, today and in future, the important thing is and will be to commit not necessarily the cheapest suppliers, but the ones, which can be incorporated into a strategic value-added chain from the company to the supplier and all the way to the customer. Ideally, such supply chain management (SCM) extends from order placement to the innovation process.

SPLS offers comprehensive consulting on the complex subject of supply chain management, including diagnosis, conception and implementation and sets great store by joint realization. The advice they offer purchasing departments is aimed at reducing material costs and optimizing customer supply while at the same time reducing capital tie-up. SPLS additionally uses a quick-assessment method for rapid identification of the strengths and weaknesses of the supply chains.

The extent to which supply chain management will change the face of corporate procurement is illustrated in a further result of an international Benchmark Logistics Study, according to which SCM is at present practiced mainly at national or regional level. Over the next five years, however, 70% of European and American as well as 45% of Asian companies are expected to have completed their expansion to global systems. Siemens help their customers to be among the best in their field right now. (SPLS Brochure supplied by the Corporate Communications Dept)