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IT Investment in ABC Textile and Dyeing: Asia Pacific Perspective¹

Quyen Le, Deputy Director at ABC Textile and Dyeing Joint Venture Company (JVC), returned from a meeting with an Enterprise Resource Planning (ERP) service provider. Quyen was wondering which options of ERP implementation would be best suited to gain staff support and prepared the company for long term development.

ABC had undergone considerable growth in recent years. Having become one of leading manufacturers of denim fabric in Vietnam market, the company was now facing some organizational challenges. To cope with pressing competition in local and overseas markets, ABC had needed to acquire internationally recognized certification for its quality control system and standardized manufacturing process. The company implemented a quality management process in order to achieve its goal of ISO9000:2008 certification. There was substantial additional paperwork to be handled with the new process. ABC currently used an outdated decentralized computing system in managing its denim manufacturing process. It was time-consuming and difficult to obtain timely and accurate production information—including material planning, production costing, machinery inventory, production reports—and difficult to share information among departments. Furthermore, over a hundred different reports for various stages of the denim manufacturing process were generated and handled by several departments.

Lacking the technical knowledge to deal with complex technological context, Quyen considered outsourcing the implementation of an ERP system to ease the documentation tasks required by the ISO 9000:2008, and to manage more effectively the denim manufacturing and to streamline the reporting system.

Facing concerns and criticisms from staff during the implementation of the ISO 9000:2008 quality management process due to its complex, time-consuming documentation requirement and added workload with no immediate benefits, Quyen was facing a tough decision whether to move forward with implementing an ERP system that promised another tough challenge to get the support from staff and required necessary organizational changes to create business value from the information technology (IT) investment.

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Textile Industry

ABC Textile and Dyeing JVC (ABC) was part of a textile industry that represented an important component of the global and local economies.

Global Textile Industry

The global textiles and garments industry formed an important component of world trade flows, particularly for some developing and least developed countries where clothing accounted for a large proportion of total exports. In 2004, world exports of textiles were valued at 195 billion US dollars and of clothing at 258 billion US dollars, representing 2.2% and 2.9% respectively of total world merchandise trade (WTO, 2005). Developing countries produced half the world's textile exports and nearly three-quarters of the world's clothing exports (UNCTAD, 2005).

Trade patterns in textiles and garments were similar although textiles tended to be a capital-intensive business, while garment-making was labour-intensive and usually relied on a low-cost workforce. For textiles, the European Union (EU) was the biggest exporter (if including intra-EU trade), followed by China. For clothing, the EU was again the biggest exporter (including intra-EU exports), followed by China with a 24% share of world garments exports

India, Turkey, Pakistan, Indonesia, Thailand and Mexico all ranked among the top 15 textile exporters, according to WTO trade statistics in 2005. Overall, Asia accounted for 45.1% of world textiles exports in 2004. The EU and the US were the biggest importers of textiles, followed by China, which needed fabric for its large garments industry.

Although all other countries lagged far behind, Turkey, Mexico, India, Indonesia, Bangladesh, Thailand, Vietnam, Tunisia and Pakistan were all included among the top 15 clothing exporters. Overall, Asia accounted for 46.8% of world clothing exports in 2004. The major importers of clothing were the EU and the US, with Japan trailing in third place.

The Vietnam Textile Industry

Located on the Indochina Peninsula in Southeast Asia, the Socialist Republic of Vietnam was one of the fastest-growing economies in Asia. The textile and garment sector was one of the country's largest industries and a key contributor to the economy. Despite the global economic difficulties during the preceding few years, Vietnam's textile and garment industry continued to raise its profits and improved its status in the global market.

According to the Vietnam Textile and Apparel Association (VITAS), Vietnam's garment and textiles exports accounted for 2.5 percent of global market share in the year 2010. In conjunction with the positive conditions for improvement and expansion, the sector itself had set a goal of becoming one of the top three garment and textile exporters globally. A growing global market share, market advantages, large orders and a 15- to 20-percent product price increase could help the sector reach its 2011 target of more than 13 billion US dollars in export revenues. Additionally, the garment and textile sector was expected to record a growth rate of 20 to 30 percent by 2012 so that it could meet the export target of US\$ 18 billion by 2015. "The major target and it will be an uphill task for the sector as it will compete with big rivals like China and other free markets", Le Van Dao, vice chairman of VITAS stated in a recent interview.

Although this sector was making obvious steps towards becoming a segment leader in the overall national economy, textile production had been facing some noticeable issues. Besides the effort to boost supplies of raw material in order to meet domestic fiber demand, garment manufacturers

were facing a shortage of labor, especially skilled workers who were capable of dealing with new production technologies and a more professional working environment. At the same time, garment and textiles manufacturers were becoming more aware of technology investments, which occupied a large proportion in the sector's development plan for 2015 and afterward.

Information Technology (IT) Usage in Vietnam Small and Medium Enterprises (SMEs)

According to a government figure quoted in Business-in-Asia.com in 2011 the number of SMEs in Vietnam was nearing 400,000 and represented nearly 99 percent of the number of businesses in the country, employing 77 percent of the workforce and accounting for 80 percent of the retail market. According to Vietnamese General Statistic Office over 40% of GDP was produced by SMEs and the sector had seen a regular rise in their profit by approximately 20% every year. Some SMEs had grown to become significant players in their industry and proved ready to compete effectively with larger enterprises--especially in the digital world--based on their knowledge and innovation capability.

A recent survey by Pham (2010) reported that the level of IT usage of Vietnamese enterprises was at the average level and needed to be improved. As for the SMEs segment, there were positive signs of implementing IT, especially enterprises with about 100 – 200 employees. There were still certain challenges for Vietnamese SMEs: they did not have enough sources for investing and developing IT within their enterprises; they found it difficult to name their real need and direction, which led to a pitfall in implementing a proper information technology system.

The Company and Market

ABC Textile and Dyeing JVC (see Exhibit 1 for the company's organizational structure) was established in 2005 with a registered capital of \$12 million by B Group; a family owned business group which had over 25 years of entrepreneurial experience in Vietnam specializing in providing industrial services. Their main factory was located in a province just outside Hochiminh City, the busiest city in Vietnam.

B Group was founded by Hung Le, who had been a successful businessman in developing industrial zones around the Hochiminh City's area. In an effort to diversify his business portfolio, Hung had decided to invest in textile manufacturing and dyeing to take advantage of a manufacturing facility available in one the group's industrial zones. The development and operation of the ABC so far had been a learning process due to Hung's lack of knowledge and experience in this new business area.

The company had gained prominence among the denim fabric manufacturers in Vietnam. According to ABC's research, Vietnam's denim market consumed around 100 million meters per year. Local suppliers produced around 20 million meters and ABC produced around 10 million per year.

The denim fabric of ABC had become highly regarded for its premium quality. ABC produced a wide range of denim fabrics comprising 100% cotton, cotton spandex, polyester cotton, stretch fancy, polyester cotton spandex, mercerized, fancy cross-hatch and khaki (see Exhibit 2). The stretch denim fabric of the company was popular for its comfort and quality. These cotton fabrics were popular among people of all ages.

The majority of ABC's customers were from domestic market including leading local textile manufacturers and industry distributors. Others were from Asian countries including Thailand, Cambodia, and Laos.

The local textile market leader was Phong Phu Corporation--a state-owned company, member of Viet Nam National Textile and Garment Corporation. Founded in 1964, Phong Phu was one of the most successful and biggest textile companies in textile the industry. Phong Phu produced yarns, towels, denim fabrics, garments, and sewing thread of all kinds. Vietnamese state-owned companies often had a competitive advantage over private-owned ones. State-owned companies had access to vast government funding and sponsorship in approaching both domestic and overseas markets. Other competitors were from local denim distributors that mainly imported from China (who often undercut selling prices).

The upward trajectory of Vietnam's garment industry created great demand for material suppliers. This put a stress on the supporting industry in Vietnam. The shortage of suppliers had also put Vietnam's garment producers at a disadvantage with respect to other countries. ABC's objective was to meet the demand of this market by offering unique and highly value-added products using the most advanced technologies.

The company's long term objective was to target the international market through garment manufacturers. To support this objective, the company had recently acquired 15 Toyota weaving machines from Japan that would add an extra 1.5 million meters capacity, bringing total annual capacity to approximately to 12 million meters of denim fabric.

Current Operation Challenges

Quyen Le, the Deputy Director at ABC, recalled that there had been major changes in the business direction. The company had recently grown substantially. The dyeing factory was operating at full capacity with 3 shifts running almost 24/7 and more machines being acquired to increase capacity by 20% (see Exhibit 3 for a list of machines used). However, Quyen had seen stiff competition in the local market and higher expectation from potential customers who were looking for reliable, quality-proven suppliers in the denim fabric market.

In considering the operations of the company, Quyen identified three challenges that were particularly pressing: 1) Completing ISO9000:2008 quality management process certification, 2) Rationalizing the denim manufacturing process, particularly the dyeing stage, and 3) Integrating the numerous reports that had evolved in the absence of a centralized IT system. These three challenges are now described.

ISO 9000:2008 Quality Management Process Certification

ISO 9001:2008 (see Exhibit 4 for ISO 9001:2008 Element Process Flow) sets out the criteria for a quality management system and is the only standard in the family that can be certified. It can be used by any organization, large or small, regardless of its field of activity. In fact ISO 9001:2008 has been implemented by over one million companies and organizations in over 170 countries.

The standard is based on a number of quality management principles including a strong customer focus, the motivation and involvement of top management, the process approach, and continual improvement. Using ISO 9001:2008 helps ensure that customers get consistent, good quality products and services, which in turn brings many business benefits.

Checking that the system works is a vital part of ISO 9001:2008. An organization must perform internal audits to determine how its quality management system is working. An organization may decide to invite an independent certification body to verify that it is in conformity to the standard, but there is no requirement for this. Alternatively, it might invite its clients to audit the quality system for themselves.

A year previously, Quyen had discussed with the business founder, Hung Le, the benefits of achieving ISO 9000:2008 certification of the company manufacturing process. The existing practice of managing the business had been ad-hoc, lacking in documented procedures and prone to loss of staff's knowledge if someone left the company.

At first, Hung disagreed with Quyen's suggestion as the company was still making good profit and the staff was used to the current processes. The introduction of ISO 9001:2008 necessarily involved the cost of hiring certification consultants, certification fees, and extra time to document current work flow practice and procedures that the staff had to complete. "Why do we have to go through that much hassle and incur expense since the company is making profit?" Hung remarked toward the implementation effort. Eventually, however, Hung was convinced to move forward. Quyen faced several issues during the implementation of ISO 9000:2008. The intention of implementing ISO was to set up guidelines and maintenance procedures that any newcomers to the factory could understand. However what Quyen had not fully anticipated before the implementation was the magnitude of the increase in administration cost and labor (due to overtime or hiring positions to do paperwork) that occurred. In addition, the large amount of additional paperwork and procedures were causing delays in daily operations.

Denim Manufacturing Management

As a textile manufacturing firm, ABC needed to plan raw material inventory and production schedules in order to supply customer orders. There were quite a few challenges with the current way of managing the whole manufacturing process.

Denim fabric dyeing was a complex production process (see Exhibit 5). The fabric had to go through multiple steps with various machines. There was great deal of manufacturing information to be recorded for each step. There were more than 200 chemicals used throughout the entire dyeing process. Quite often chemical ingredients needed to be adjusted depending on the quality of the fabric, dying temperature, and color selected for each product lot. Currently there was no system to record such variation in dyeing quantity.

Quyen noted "for each production order, we often need to use multiple machines in the rolling process. Sometimes, an urgent order needs to be completed ahead of schedule, and fabric machines already allocated to an order have to be used to fulfill the urgent one. When that happens, the company cannot be sure how the changes will affect the pending order."

During the Quality Control step, any product faults were detected and the product was then classified into different quality categories. Currently, there were several departments collecting production information at each step of the dyeing process. The information included order number, lot number, production stage, and other specific material data. Staff at each department then recorded the information into various Microsoft Excel Spreadsheets and Microsoft Access databases. With this approach, it could be difficult and time consuming to combine information from all stages of the production process to provide comprehensive information needed to determine material usage, identify product faults, make production cost estimates, and perform production planning.

Sometimes, when there were complaints from a customer, Quyen faced challenges identifying the source under the existing system, stating that: “We hope to be able to trace back to the cause when problems arise and to be able to analyze the root when receiving customers’ complaints, thus making appropriate adjustment and prevent reoccurrence.”

Calculating material usage rate was essential to calculating cost of goods sold. Quyen wanted to be able to control production material such as chemical, yarns including product faulty categories, and wastage of yarn. Aside from that, Quyen also wanted to have better maintenance of the machines during the dyeing process.

Decentralized Reporting System

During the evaluation of the current reporting system, Quyen found that there were more than 100 reports generated in different departments throughout the denim manufacturing process. For almost every department—including Quality Assurance, Production Technology and Dyeing factory—two administrative staff were responsible for entering necessary data and generating reports. Even worse, some important production information was missing as it was not designed to be recorded. In particular, the Operations Director complained that one important report for keeping track of denim materials used for a particular production lot and its respective order could not be completed due to unavailability of relevant data.

Currently ABC had about a dozen PCs used in various departments. These mainly used Microsoft Office applications to manage production information. Sharing information between departments could be problematic. The only properly developed software was the accounting package used by the Finance-Accounting department. There was no dedicated IT staff in the company.

ERP Option

Enterprise Resource Planning (ERP) solutions were designed to help enterprises improve their overall management. An end-to-end ERP system often unified modules for management of finance and accounting, procurement, sales, inventories, manufacturing, customer relationship, and human capital into a single platform to facilitate corporate management and business operations.

In the early 2000s, ERP solutions were introduced into the Vietnamese business environment. Vietnamese companies had increasingly been looking for ways to make their operations more efficient and effective. Many of those considered ERP implementation as a way to drive organisational change. A 2007 market report by PC World Vietnam noted that Vietnam’s ERP market was still relatively small, but it was a growing market that had changed dramatically over the previous five years. Specifically, during the period beginning in the year 2000 (when giant ERP solution providers such as Oracle and SAP began to enter the Vietnamese market), there had been vigorous competition among foreign and Vietnamese ERP providers. For example, during the period of 2004-2007, Oracle had become the leading ERP provider in the Vietnamese market (see Exhibit 6).

Generally, Vietnamese companies, including SMEs, believed ERP solutions could help them to improve their business process and performance. Particularly, large corporations having subsidiaries or listed companies on the local stock exchange employed ERP systems to manage and mobilize their resources of their business. Furthermore, these solutions could facilitate business transparency and allow comprehensive management of corporate resources and business problem solving in real-time. Those in the fields of pharmaceuticals, real estate, banking, retail, and con-

sumer goods production continued to pursue the implementation of ERP because of these benefits.

In Vietnam, ERP solution providers could be giant foreign software providers such as SAP (Germany), Oracle (USA), and local ones such as FPT, Votiva, and many other medium size companies. Large foreign ERP companies often worked with large enterprises to develop million dollar ERP systems and the projects may take years to complete. Most SMEs in Vietnam could not afford to buy ERP system from foreign service providers. Local ERP solution providers could offer customized packages that suited local business requirements especially in complying taxation standards with much lower cost. The average cost for implementation of an ERP project in Vietnam ranged between \$US 100,000 and \$US 1,000,000 for projects conducted by foreign ERP providers such as Oracle or SAP, whereas most Vietnamese ERP providers got involved for projects under \$US 100,000 (see Exhibit 7).

ERP Implementation

For a small business, implementing a complete or partial ERP system could be a significant drain on the operating budget and business disruption. Employees at all levels must be trained because the systems were complex and involved more than just data entry - the users were also involved in data analysis and decision making. A small business might not be able to find an ERP system that fulfilled all of its needs, which meant that parts of the system would have to be customized. The required customization added time and costs to the ERP implementation. The payback, in terms of cost savings, was not immediate. Productivity might suffer after an ERP implementation because employees had to learn new software applications and new methods of data entry and analysis.

For “Big Bang” – as the complete implementation of ERP system was called – a company needed to discard all of their legacy systems and install a fully-integrated ERP system across the company. This option required organization-wide changes and support from all departments. Business workflows might need to be revised and staff roles needed to be defined clearly. The ERP system could automate the current hierarchical authority structure in companies. Full-scale ERP implementation required higher up-front cost and some business disruption during the implementation process. However, long term cost might be reduced if the ERP solution provider could offer discounts and the system was installed in a manner that minimized business disruption (as in the partial-scale ERP option described below).

Companies could choose a piecemeal or partial-scale approach, implementing just one or two modules and adding others as sales grew and operating requirements changed. This way would help reduce the overall cost and did not require major changes to the current business processes. However, complete organizational resources management was not yet possible and some separate systems were still needed to run the missing components. In the long term, if the company wanted to have other modules implemented, higher cost of consultation and development would occur.

Another issue was how to choose a suitable ERP solution provider. Though financial burden was an important factor in selecting an ERP solution, ensuring the system quality and effective advice were even more critical. It was evident that many ERP implementations resulted in delay, not satisfying business requirements, user dissatisfaction of the changes, or budget blowout.

B4U – An ERP System

Quyen had been approached to run B4U, a complete ERP system designed and developed by Patsoft, a local medium-sized ERP provider. As of 2012 Patsoft was the only Vietnamese ERP company developing ERP packages to suit specific industries. In particular, Patsoft offered B4U Enterprise for large enterprises with multi subsidiaries: B4U solution for textile, pharmaceutical, and agricultural industries; A4U Enterprise and A4U Standard for accounting solutions intended for large companies and SMEs respectively.

B4U comprised the following modules: Procurement Management, Sales Management, Inventory Management, Quality Control, Production Management, Online Management, Human Resource Management, and Accounting & Finance (see Exhibit 8). These modules performed the following functions (see Exhibit 9 for break-down of each system module).

- *Module 1-Procurement Management:* responsible for recording and controlling complete commodity purchasing cycle. Purchasing module followed ISO quality standard and monitored input of materials, quality control of material, managing all invoices, purchase contracts, distributing purchasing expenses, and producing complete purchasing reports on demand.
- *Module 2-Sales Management:* responsible for recording and controlling complete product sales cycle. Sales module managed all sales staff by region, calculating sales commission, performance analysis of each staff, promotion plan, customer relationship management, product warranty and after-sales service, and producing complete sales reports on demand.
- *Module 3-Inventory Management:* responsible for managing all stock entries, bar codes, stock take, safe stock entry and early warning, stock distribution for different orders.
- *Module 4-Quality Control:* used for quality control and assurance. It recorded quality control results and allowed quality pass approval. It also managed production materials by lot throughout the production process and the quality of finished products and materials.
- *Module 5-Production Management:* customized to suit local production process of various industries. It integrated all involved components for the production process and could allocate one product into various production procedures or production plans, created production orders for multiple products, production progresses, and estimated production cost for each order, production lot.
- *Module 6-Human Resource Management:* managed staff profiles, labour contracts, staff performance and salary. It could record staff time-in and out, which was useful for factories with a large number of workers. This module was integrated with the Accounting module for easy salary payment,
- *Module 7-Online Management:* allowed remote access through the Internet to all key information of all modules anywhere, anytime. It allowed customization of business reports in the form of a balanced scorecard and could drill down to specific business areas.
- *Module 8-Accounting & Finance Management:* specifically designed to satisfy strict Vietnamese accounting standards; could be customized to suit the needs of each business. It provided standardized templates for Invoice, Credit memo, Debit memo, Payment, Receipt Invoice, and many more accounting practices.

For a complete workflow of a B4U ERP system that integrated all business processes, refer to Exhibit 10.

Patsoft proposed standard procedure for implementing its ERP package (see Exhibit 11). There were six deliverables of an ERP project that Patsoft would deliver to their clients. The major deliverables of a Patsoft's ERP project were summarized in the table that follows:

Project deliverables	Description
Deliverable 1: detailed inspection report.	Describing current system status and requirements of the new ERP system.
Deliverable 2: detailed system design for future workflow of all departments.	Complete and detailed description of all departments' tasks that will be supported by the new ERP system. This benchmark will be used for final project completion inspection.
Deliverable 3: list of system components, reports and itemized invoicing output.	Complete description of the ERP's reporting output, itemized invoicing, and key ERP system components
Deliverable 4: system risk analysis and prevention and recovery measures.	Evaluation of potential risks and solutions to address the risks during the project deployment and operation.
Deliverable 5: customized ERP system.	Providing the software and licensing.
Deliverable 6: usage manual	Providing detailed usage manual and training package.

ERP Decisions

Quyen summarized the existing situation:

that is pretty much what I see from this period; more negative feedback (from employees) than positive feedback. Hopefully, management can change the employees' minds. We experienced some difficulties in implementing because majority of employees were reluctant since they don't want to change their habits.

Quyen's first impression about the benefits of implementing ERP system was:

implementing ERP would help us to be able to get the information more accurately and promptly. Management would know the status of each fabric code in production instantly. Every employee has their own accounts with the system and level of access level...

each department of our company has their own database, therefore, it cannot be "merged" and making data sharing difficult. Therefore, with the ERP system, data can be more accurate because each department doesn't have to re-enter every time.

Quyen considered implementing an ERP system to manage the entire production process. Given that the company was now near completion of certifying ISO 9001:2008, Quyen had approached several ERP solution providers to get quotations and assessed their expertise and experience in providing ERP solutions. To be more certain, Quyen visited a company which had used ERP in their business to learn of any major issues from a user's perspective. Quyen was told that with the introduction of ERP it incurred additional costs, but the work was completed faster with the help of ERP.

In addition to costs, staff resistance needed to be considered, particularly given multiple changes in short time. Hung, the B Group founder, had changed his attitude toward the introduction of new technology to better manage the current business operation. Quyen's explanation of the long term impact in effective business management tools-- including improving competitiveness against major competitors--had been convincing. Hung had now fully supported implementing a new IT system. However, gaining acceptance and support from all staff for the changing business processes might be another matter.

Due to concern of budget and level of complexity and changes to the current practice, Quyen was hesitant to recommend a full scale, "big bang" ERP implementation. Staff's resistance was adding to her concerns. One of the key staff who had been with the B Group longer than Quyen had been alive already showed clear reluctance to cooperate and there was not much Quyen could do to force cooperation.

So many things went through Quyen's mind right now. Should she go ahead with the ERP implementation? Should it be installed as a full ERP package or should she start with partial ERP modules managing Customer Order, Inventory Control, and Production? Which preparation could be done to ensure the success of the ERP implementation and gain the support of the users? How could she select a reliable ERP solution provider?

Quyen went back to her office and laid her eyes on the customer orders piling up on her desk.

References and Suggested Readings

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Biographies



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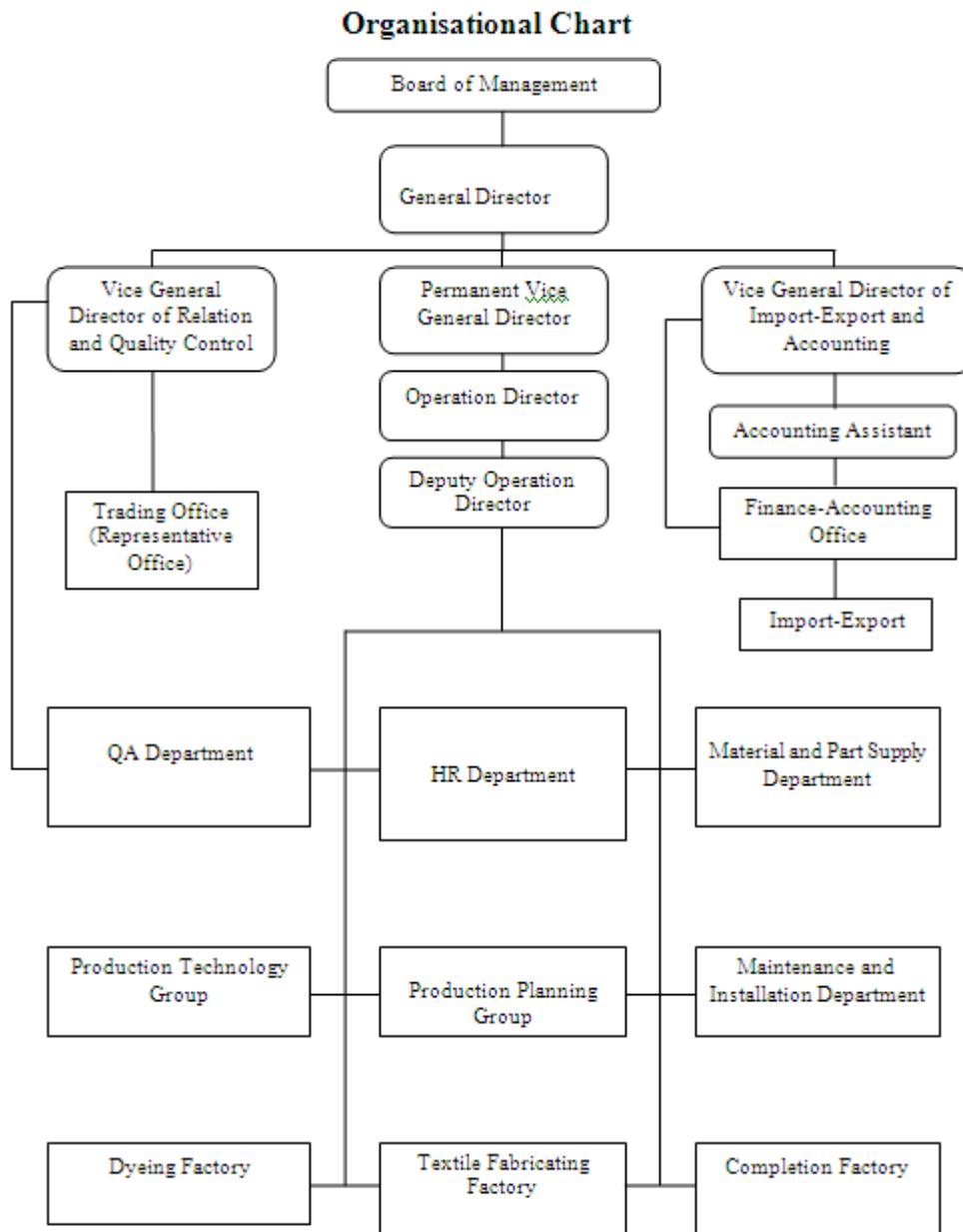
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Exhibit 1: ABC Organizational Chart



Source: from ABC Company “used with permission”

Exhibit 2: Denim Fabric



Exhibit 3: Inventory of Dyeing Machines

Machine	Producer	Quantity	Image
Warper	Taya	2	
Sheetdye	Taya	2	
Air-jet Loom	Toyoda	90	
Fabric checking machine	STT	8	
Stencer	Sheentech	1	
Singeing machine	Fongyung	1	

Source: from ABC Company “used with permission”

Exhibit 4: ISO9000:2008 – Element Process Flow

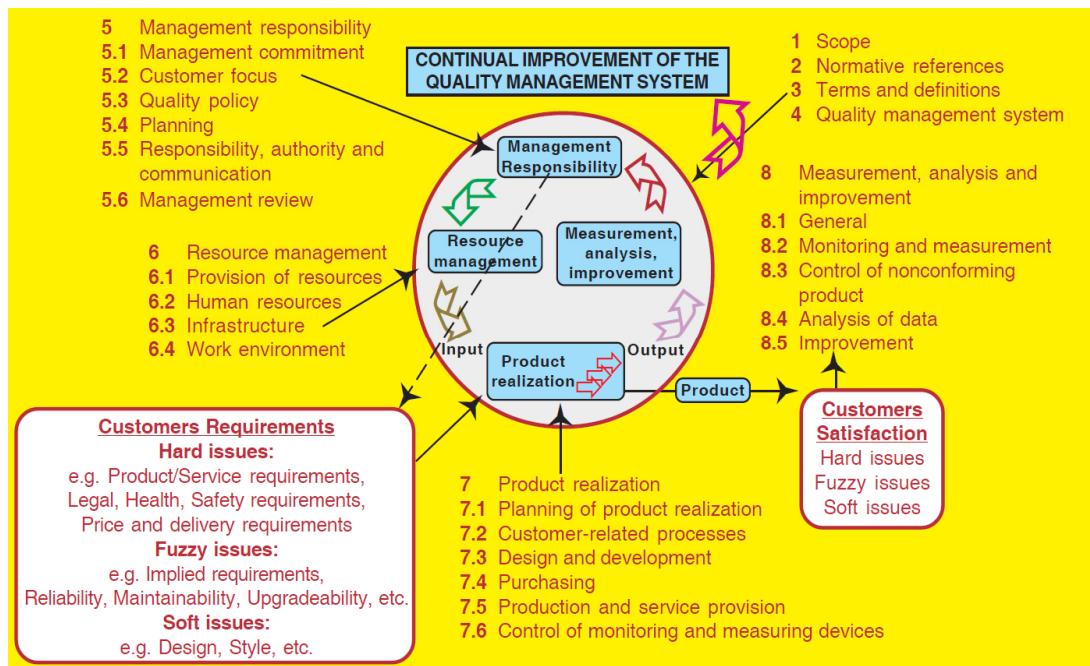
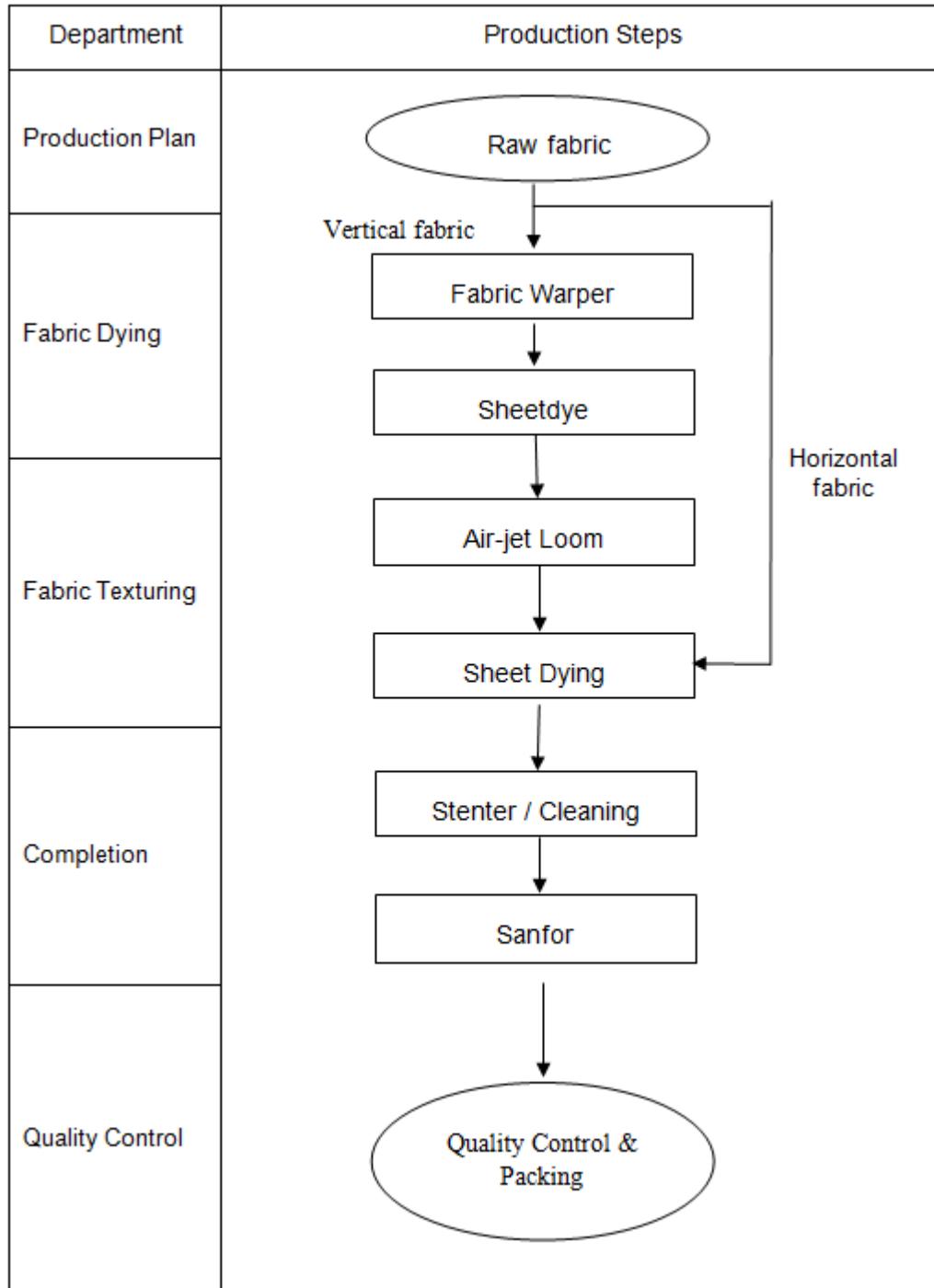
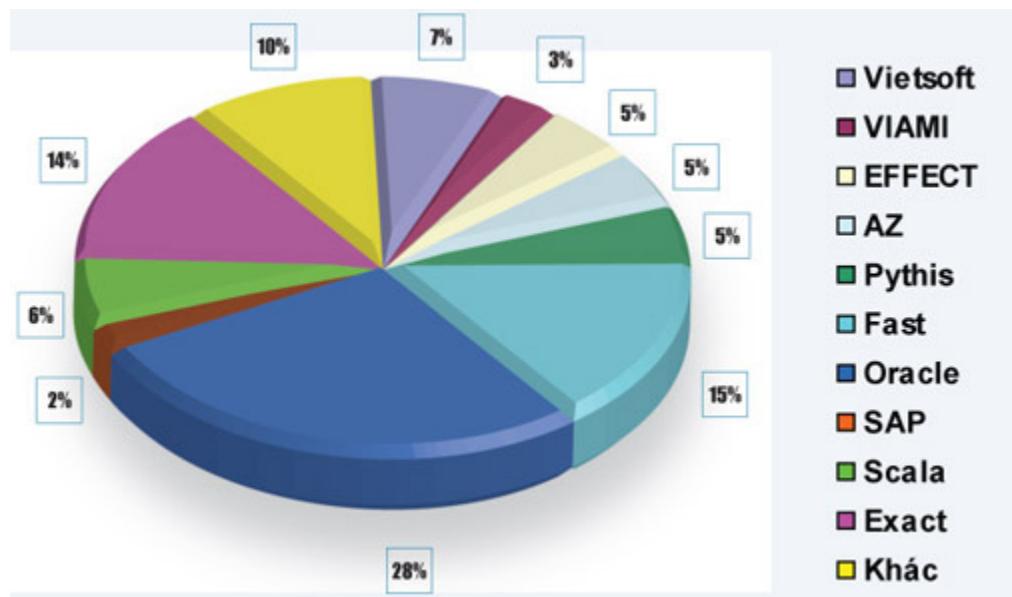


Exhibit 5: Denim Dyeing Process



Source: from ABC Company “used with permission”

Exhibit 6: Viet Nam's ERP Share Market in 2007

Source from PC World (Hien, 2007)

Exhibit 7: The Average Cost for Implementation of an ERP Project in Viet Nam

ERP Solutions	Average cost (\$US)
SAP	400,000 – 1,000,000
Oracle	100,000 – 500,000
Scala	7,000 – 200,000
Exact	50,000 – 100,000
AZ	70,000
Pythis	30,000
Fast	25,000
EFFECT	8,000 – 50,000
Vietsoft	6,000 – 40,000
VIAMI	2,000 – 30,000

Source from PC WORLD (Hien, 2007)

Exhibit 8: B4U ERP System – Key Modules

Source: from Patsoft Company “used with permission”

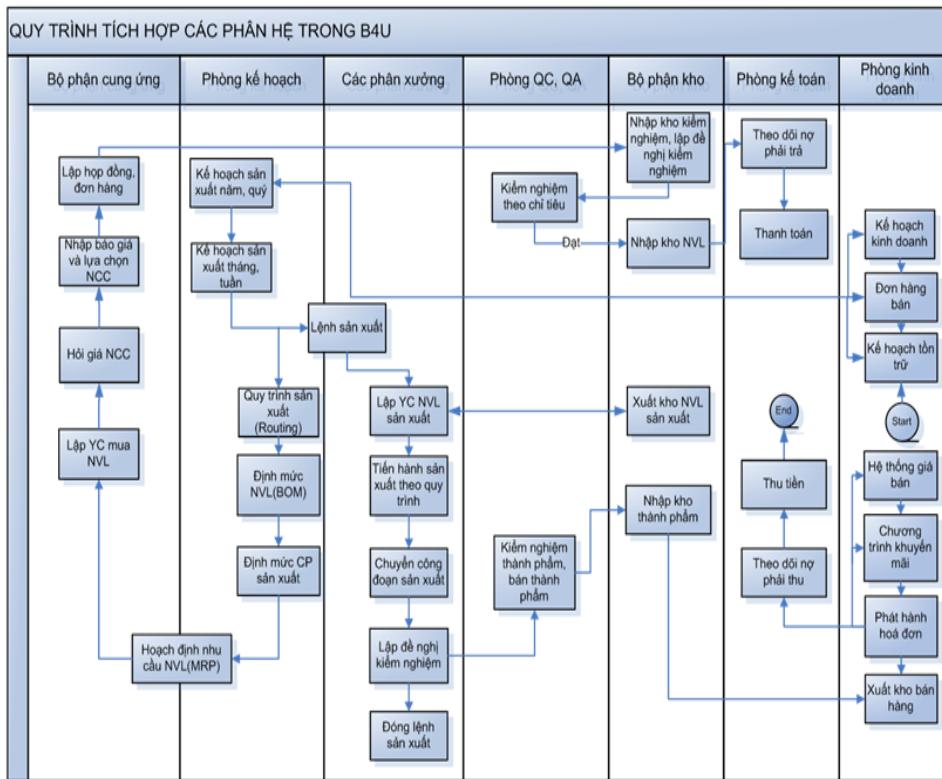
Exhibit 9: B4U ERP Modules

(Translated version: from top – clockwise)

<p>Module 1: Procurement Management 1. Purchase request 2. Supplier assessment 3. Quality testing 4. Inventory request 5. Purchase order 6. Supplier selection</p>	<p>MUA HÀNG</p> <ul style="list-style-type: none"> Yêu cầu mua hàng Đánh giá NCC Kiểm nghiệm Nhập kho Đơn đặt hàng 	<p>Module 5: Production Management</p> <ol style="list-style-type: none"> 1. Production target 2. Outstanding 3. Cost estimate 4. Demand planning 5. Production plan 6. Production procedure 	<p>SẢN XUẤT</p> <ul style="list-style-type: none"> Định mức Đề dang Giá thành Hạch định nhu cầu NVL Kế hoạch SX
<p>Module 2: Sales Management 1. Quotation list 2. Sales contract, sales order 3. Wholesales 4. Credit limit 5. Invoices 6. Promotions</p>	<p>BÁN HÀNG</p> <ul style="list-style-type: none"> Bảng giá Hợp đồng, đơn hàng Bán hàng theo bộ Hạn mức tín dụng Khuyến mãi 	<p>Module 6: Human Resource</p> <ol style="list-style-type: none"> 1. Insurance 2. Labor counting 3. Staff evaluation 4. Labor contract 5. Staff entitlement 6. Staff information 	<p>NS-TL</p> <ul style="list-style-type: none"> Bảo hiểm Chấm công Đánh giá nhân viên HD lao động Thông tin nhân viên
<p>Module 3: Inventory Management 1. Product lot, expiry 2. Inventory location 3. Bar codes 4. Stock check 5. Safe inventory 6. Segment coding</p>	<p>KHO</p> <ul style="list-style-type: none"> Lô, hạn sử dụng Vị trí kho Mã vạch Kiểm kê Cấu trúc mã theo segment 	<p>Module 7: Online Management</p> <ol style="list-style-type: none"> 1. Online 2. Plan & Completion 3. Cash & Account Payable 4. Inventory 5. Subsidiary 	<p>WEB LÃNH ĐẠO</p> <ul style="list-style-type: none"> Online Kế hoạch-thực hiện Tiền, công nợ Tiền độ sản xuất Đa công ty
<p>Module 4: Quality Control 1. Material Test 2. Semi-product Test 3. Final product test 4. Product lot check 5. Stability check 6. Quality control setting</p>	<p>QC, QA</p> <ul style="list-style-type: none"> Kiểm nghiệm NL Kiểm nghiệm BTP Kiểm nghiệm TP Quản lý Hồ sơ lô Theo dõi độ ổn định 	<p>Module 8: Accounting & Financial Management</p> <ol style="list-style-type: none"> 1. Cash flow 2. Payable accounting 3. General accounting 4. Banking account 5. Fixed asset management 6. Receivable accounting 	<p>TÀI CHÍNH</p> <ul style="list-style-type: none"> Kế toán tiền mặt Kế toán phải trả Kế toán tổng hợp Kế toán ngắn hạn Quản lý TSCĐ

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Exhibit 10: B4U ERP Work Flow (in Vietnamese)



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Exhibit 11: PATSOFT's Process to Implement an ERP Project



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