Asia-Pacific
Economic Cooperation

Malaysia Plastic Sdn Bhd
Malaysia

To Close or Not to Close, That is the Question

Written by

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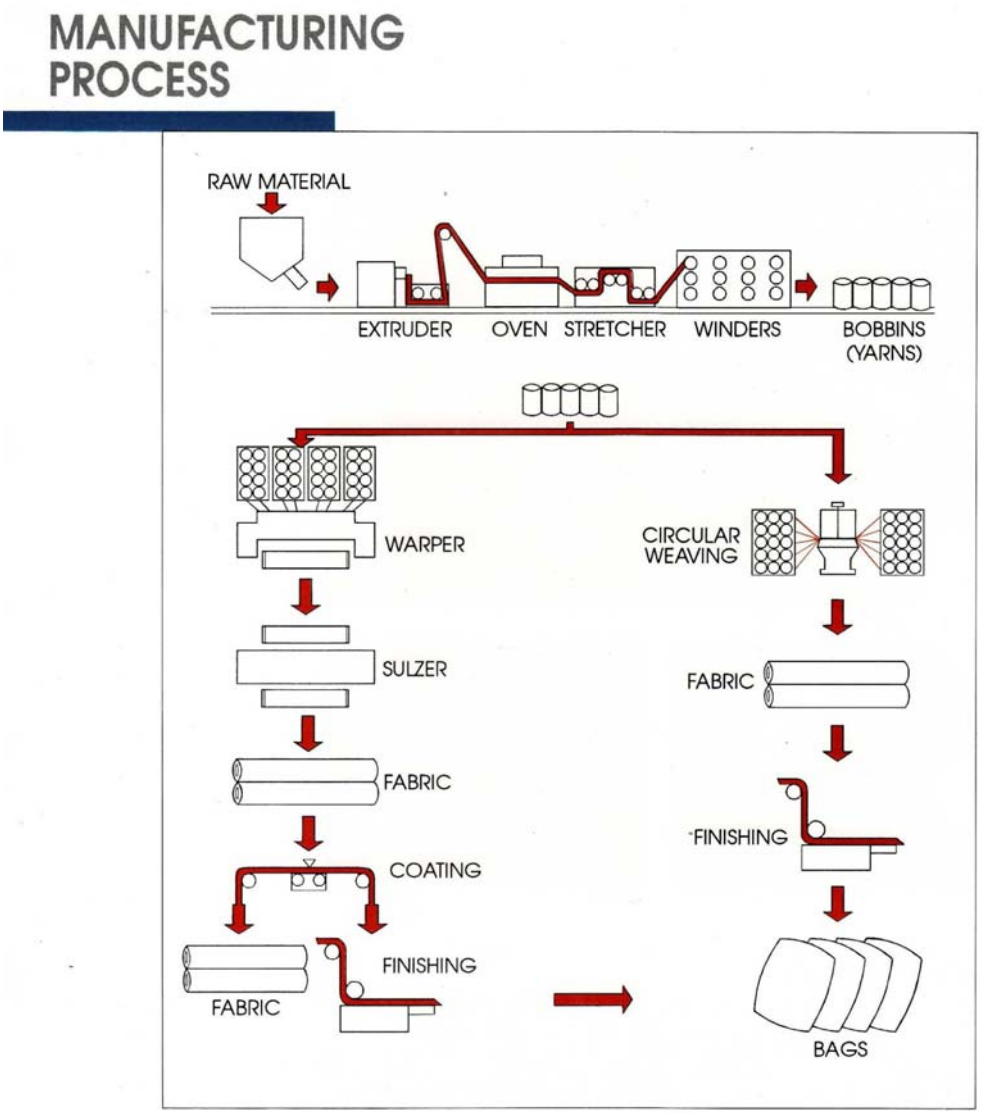
The case was developed with the cooperation of Open University Malaysia solely for educational purposes as a contribution to the project entitled "IPR Strategies for Emerging Enterprises – Capacity Building for Successful Entry to Global Supply Chain," conducted under the auspices of the Asia-Pacific Economic Cooperation (APEC). The case is neither designed nor intended to illustrate the correct or incorrect management of the situation or issues contained in the case.

Names of individuals, organizations as well as figures are disguised.

It was drizzling in the morning of 21 July 2006. From his office window, Mr Tony Yew, the Managing Director of Malaysia Plastic Sdn. Bhd. (MPlastic) could see a lorry loaded with PP circular bags leaving the warehouse. He had just gone through the company's financial analyses from 2003 to the first half of 2006 presented by his Chief Accountant. The financial analyses (see Exhibit 1) at the company as well as at the product type levels showed that in the second quarter of 2006, the company with a revenue of RM10.9 million suffered an operating loss of RM1.25 million. In the previous quarter, it had RM9.7 million revenues and RM0.59 million operating loss. The company had been experiencing deteriorating margin since 2004 which was attributed to intense market competition in the PP circular bags sector. Before the company's financial situation became worse, Mr Yew needed to decide soon whether to close the production of PP circular bags.

Exhibit 1.



Background

Mr. Tony Yew was appointed the new Managing Director of MPlastic in January 2003. He was an accountant by training and graduated with an MBA from a UK university. He had overcome many challenges throughout his 35 years career in manufacturing. Although he had identified profit margin improvement as his priority shortly after taking office, he did not foresee that profit would deteriorate so severely that it would threaten the survival of MPlastic.

In March 1972, MPlastic was incorporated as a private limited company with an RM18 million paid up capital. The company commenced operation two years later to manufacture and supply polypropylene (PP) woven bags used for packing flour, sugar, fertiliser, chemical resins, soya bean, etc. The woven bags industry was at its infancy at that time and was dominated by MPlastic and the other three pioneer manufacturers. All the four companies enjoyed tremendous growth for the next 23 years, benefiting from a growing population that created demand for food, chemical and agricultural products. The woven bag industry reached its peak in the first half of the 1990s. Due to technological barrier, the market was dominated by the four pioneers who had control over the supply and selling price. It was the golden era for woven bags producers.

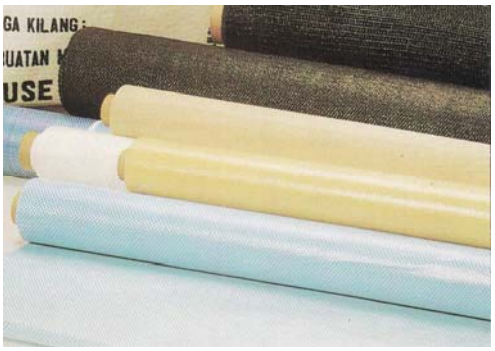
During the golden era, MPlastic PP circular bags production capacity reached six million pieces per month with a workforce of 500. Among the four pioneers, MPlastic was the most stable and consistent in terms of sales performance as it had the advantage of supplying almost 90% of its PP circular bags to a captive market made up of its holding and related companies engaged in flour, sugar and fertilisers production.

Products and Processes

The products of MPlastic were circular bags, tubing bags, fabrics, FIBC, and sewing yarn (see Exhibits 2 and 3).

Exhibit 2.

Polypropylene Woven Bags



Polypropylene Woven Fabrics

Exhibit 3. Bulker Bag or One-Ton Bag

By the end of 2006, MPlastic had invested close to RM80 million in properties, plant, and equipment for an installed capacity (in extrusion) of 350 metric tons per month. However, the actual production was only 260 metric tons (see Table 1) due to sluggish demand.

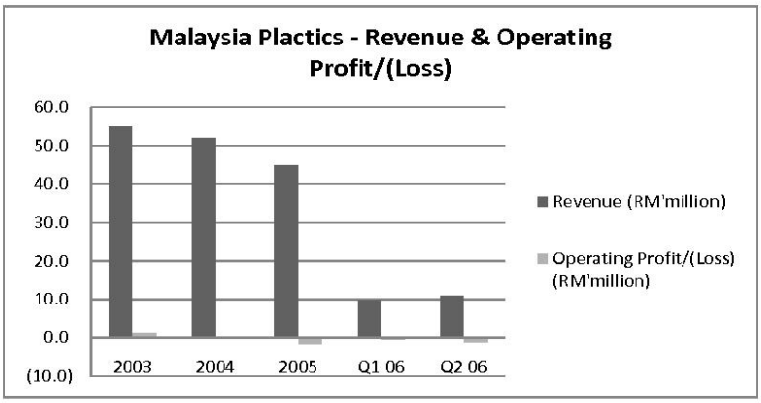
Table 1. Production Capacity as at 30th April 2006

Processes	Monthly Installed Capacity	Monthly Actual Production	Qty Sold	Qty Used for next process	Monthly Capacity Utilisation
Extrusion	350 mt	260 mt	Yarn: 10mt	Circular fabrics: 70 mt Flat fabrics: 180 mt	74%
Circular Weaving	100 mt	70 mt	0	PP Bags: 70 mt	70%
Flat Weaving	250 mt	180 mt	Fabrics: 108 mt	Tubing Bags: 50 mt FIBC: 21.6 mt	72%
Finishing – PP Bags	1.5 million pcs (150 mt)	1.2 million pcs (120 mt)	1.2 million (120 mt)	0	80%
Finishing - FIBC	15,000 pcs (36 mt)	9,000 pcs (21.6 mt)	9,000 (21.6 mt)	0	60%

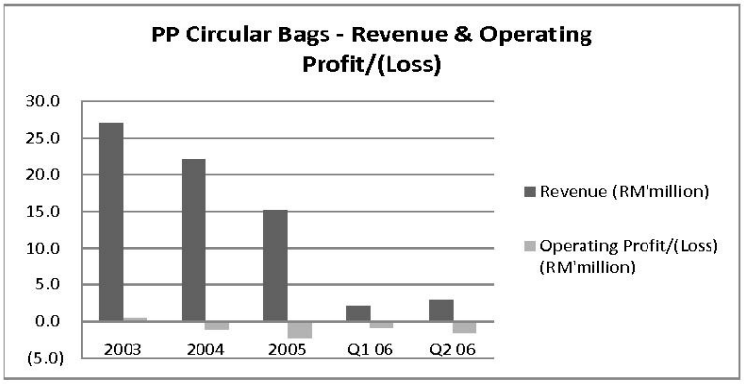
The main product was PP woven bag, which could be made from flat woven fabrics or circular fabrics as shown in the manufacturing process flow in Exhibit 4. Warp and weft yarns were first extruded and wound up in bobbins at the end of the extrusion process. The bobbins were put up in a creel stand, and the yarns were then pulled by a warper and wound up in a warp beam. By setting up the warp beam and weft yarn

bobbins on the Sulzer looms, the operators could produce flat fabric according to the specifications of the final products.

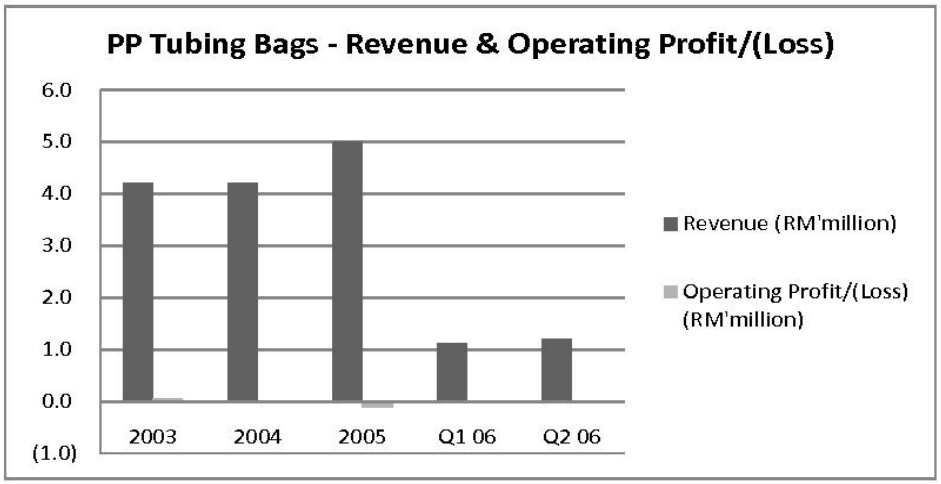
Exhibit 4. Financial Analyses from 2003 to 2006 (Company and By Product Types)



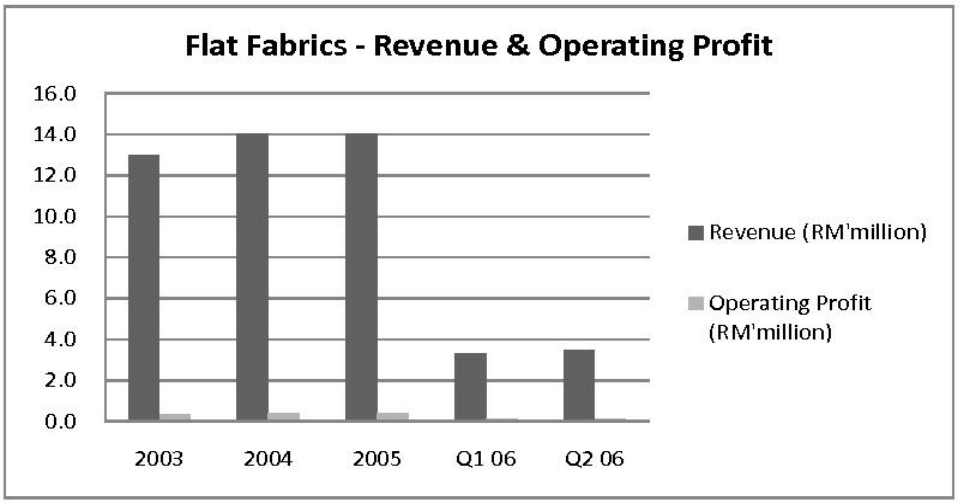
MALAYSIA PLASTIC - REVENUE & OPERATING PROFIT/(LOSS)					
Year/Quarter	2003	2004	2005	Q1 06	Q2 06
Revenue (RM' million)	55.0	52.0	45.0	9.7	10.9
Operating Profit (RM'million)	1.11	(0.38)	(1.64)	(0.59)	(1.25)



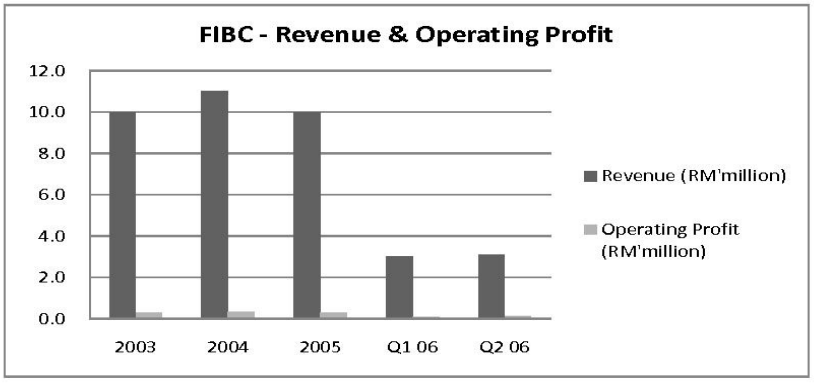
PP CIRCULAR BAGS - REVENUE & OPERATING PROFIT/(LOSS)					
Year/Quarter	2003	2004	2005	Q1 06	Q2 06
Revenue (RM' million)	27.0	22.0	15.1	2.1	2.9
Operating Profit (RM'million)	0.41	(1.12)	(2.26)	(0.78)	(1.47)



PP TUBING BAGS - REVENUE & OPERATING PROFIT/(LOSS)					
Year/Quarter	2003	2004	2005	Q1 06	Q2 06
Revenue (RM' million)	4.2	4.2	5.0	1.1	1.2
Operating Profit (RM'million)	0.05	0.01	(0.10)	(0.03)	(0.03)



FLAT FABRICS - REVENUE & OPERATING PROFIT					
Year/Quarter	2003	2004	2005	Q1 06	Q2 06
Revenue (RM' million)	13.0	14.0	14.0	3.3	3.5
Operating Profit (RM'million)	0.33	0.38	0.40	0.11	0.14



FIBC - REVENUE & OPERATING PROFIT					
Year/Quarter	2003	2004	2005	Q1 06	Q2 06
Revenue (RM' million)	10.0	11.0	10.0	3.0	3.1
Operating Profit (RM'million)	0.30	0.33	0.30	0.10	0.11

Circular fabrics were produced from circular weaving looms, which drew the warp yarns in bobbins directly from the creel stand, without going through a warper. After the weaving process, both types of fabrics had to go through almost similar finishing processes to become woven bags. By comparison, circular bags were cheaper to produce but tubing bags could command better price because of higher quality. Both types of woven bags made up about 38% of the total sales of the company (see Exhibit 5).

Exhibit 5. Income Statement for Q2 2006 by Product Types
(Analysed by Fixed and Variable Production Costs)

	PP Circular Bags	PP Tubing Bags	Fabric	FIBC	Yarn	Total Q2
Sales Volume (mt)	450	150	390	237	30	1,257
	RM'000	**RM'000**	**RM'000**	**RM'000**	**RM'000**	**RM'000**
REVENUE	2,925	1,200	3,510	3,081	198	10,914
Less: Variable Costs of Sales						
Cost of Materials	2,475	825	2,067	1,351	153	6,871
Production Variable Cost	1,170	188	741	943	24	3,066
Total Variable Costs	3,645	1,013	2,808	2,294	177	9,937
CONTRIBUTION	(720)	188	702	787	21	977
Fixed Production Cost	(450)	(180)	(335)	(427)	(6)	(1,398)
Gross Profit/(Loss)	(1,170)	8	367	360	15	(421)
Selling and Distribution Expenses	(88)	(36)	(105)	(92)	(6)	(327)
Administration Expenses	(216)	(2)	(122)	(155)	(5)	(500)
OPERATING PROFIT/(LOSS)	(1,474)	(31)	140	113	4	(1,248)

The second main product was flat woven fabric produced from Sulzer looms. Only about 30% of the flat fabrics were used for producing tubing bags; the rest were used to produce FIBC and sold as laminated or non-laminated fabrics. In contrast, all the circular fabrics were used for producing circular bags.

FIBC, also known as one-ton-bag and bulker bags, were specially designed high quality bag with packaging capacity of between 0.5 metric ton to 1.2 metric tons. MPlastic started this product in 1986 as contract manufacturer for a Japanese company—its first overseas customer—which transferred the production technology to MPlastic. It was a successful collaboration that had lasted up to 2006. Nonetheless, this product used only about 10% of the flat fabrics produced.

The market for sewing yarns was small and repeat orders were slow. This product was not given emphasis at all.

In addition, MPlastic had tried to broaden its revenue base by investing in two blown film extruders for making 1kg size polyethylene bag and a thermal press machine for making PET egg tray in 1994 and 1996, respectively. Both projects failed after eight and five years of operation due to high production cost and low capacity utilisation.

Business Environment

The business environment where MPlastic used to operate had changed since 1997, the year when most Asian economies were battered by the financial crisis. It was an attack by currency traders with the intention to devalue Asian currencies in all economies, starting with the Thai Baht. And recession spread in Asia like bush fire. The PP bag manufacturers were not spared and were fighting for orders to stay afloat. The fight inevitably ignited a price war that aggravated the already difficult business environment.

All the PP bag manufacturers were forced to downsize over the next two to three years except for one of the pioneer manufacturers, ABL Sdn. Bhd. The company believed that the key to survival was to dominate the market so as to control the bag prices and improve its profit margin; it invested about RM12 million to double its production capacity to 120 million pieces of PP bags per year. Little did they realise that another business threat was looming on the horizon at just about the same time.

In 2001, one year after ABL installed its new capacity, the Malaysian government commenced the Tariff Reduction Programmes under the Common Effective Preferential Tariff (CEPT) Scheme of the Asean Free Trade Agreement (AFTA). Under CEPT, the import duty for woven fabrics and bags was reduced from 20% to 5%, effective 2001; it was further reduced to zero percent from January 2008 onwards. With the reduction in tariff, the imported fabrics and bags were found to be cheaper than the locally produced ones for the first time. This price differential had led to the emergence of converters in the local woven bags market.

Converters, a term unheard of before 2001, were entrepreneurs who sourced semi-finished woven fabrics and unprinted PP bags and converted them into finished PP bags by performing only the cutting, sewing and printing or just the printing processes. The CEPT scheme had opened a floodgate of cheaper semi-finished materials and

removed the technological barrier to the production of fabrics for the converters. The entry barrier was further lowered with the availability of low cost but advanced cutting, sewing and printing machines from China and Chinese Taipei.

Another significant event that affected the PP bag industry was the trend to change the packaging to smaller and convenient sizes using non-woven polyethylene film since year 2000. Previously rice, flour and sugar were packed in 25kg woven bags but gradually rice was sold in 5kg and 10kg packs and flour/sugar were sold in 1kg pack. As such, the market size of PP bags shrunk because of the switch to small packaging (see Table 2 below).

Table 2. PP and PE Bags Monthly Requirement in Malaysia from 2001 to 2006

Year	Monthly Requirements (million pcs)	Percentage Fulfilled by Locally Produced 25kg PP Bags	Percentage Fulfilled by Converters Using Imported 25kg PP Bags	Percentage fulfilled by 1kg size PE Bags
2001	19.6	98%	0	2%
2002	20.6	92%	3%	5%
2003	21.6	86%	8%	6%
2004	22.7	80%	12%	8%
2005	23.8	70%	20%	10%
2006 (Projected)	25.0	60%	30%	10%

By 2004, ABL was unable to survive the competition and went into liquidation. Another pioneer had relocated its entire operation to Vietnam to operate from a low-cost environment. By 2006, MPlastic and the other remaining pioneer manufacturer found themselves losing their market share to the converters. It would be catastrophic if MPlastic could not defend its market share. Mr. Tony Yew knew that the company had to overcome these challenges with innovative solutions, and time was not on its side.

Market Profile and Positioning

The Marketing Department of MPlastic gauged the market share of its three main products in April 2006. The results were tabulated in Table 3 as follows:

Table 3. Products' Market Size and Potential Growth in Malaysia as at 30th April 2006

Product Type	Monthly Sales Volume	Estimated Market Size (Monthly)	Estimated Market Share	Potential Growth (p.a.) in Malaysia
PP Bags	1.2 million pcs	25 million pcs	4.8%	0%
Flat Fabrics	108 mt	180 mt	60%	15%
FIBC	5,000 pcs	140,000 pcs	3.6%	10%
Sewing Yarn	10 mt	50 mt	20%	2%

The marketing report also highlighted that the monthly combined installed capacity of major manufacturers and converters for PP bags was about 32 million pieces. Since the market size was only 25 million pieces, it was noted that the combined installed capacity was bigger than the market size by seven million pieces. The growth rate was expected to be zero. The gap of supply and demand was expected to widen even further when the trend of packing goods in smaller sizes of 1kg, 5kg, and 10kg continued.

Surprisingly, in spite of the adverse market condition where supply exceeded demand, certain medium sized companies were expanding capacity hoping to grow their size and market share, and new converters continued to enter the market. The price war was likely to be intensified and every manufacturer was fighting for survival.

In terms of the supply of flat fabrics, MPlastic had the biggest capacity of about 250 metric tons per month, and the largest market share. However, the company's capacity was not fully utilised. It sold about 108 metric tons of its fabrics to the market, used 50 metric tons for producing tubing bags and 22 metric tons for FIBC (see Table 1 above).

In the case of FIBC, 71% of the market share was held by six major suppliers. Each of these suppliers sold between 10,000 and 25,000 pieces a month. The balance of 29% of the market share was taken up by smaller suppliers like MPlastic.

In addition to the abovementioned production, the company also outsourced some of its products to sub-contractors in Myanmar and Indonesia to take advantage of their lower cost base.

Finally, with the help of the Chief Accountant, the Marketing Report summed up MPlastic's market position as follows:

1. The woven bags sector would remain very challenging due to unfavourable pricing and stiff competition. It was tougher for MPlastic when it still needed to address other escalated but uncontrollable operating costs (e.g., electricity, transport, payroll, etc.) which had eroded the profit margin. The income statement for Q2 2006 by product types (see Exhibit 5) analysed the contribution and profitability of each product type. PP bag prominently showed negative contribution and operating loss for the quarter.

2. MPlastic was in effect competing with the PP bag plants in Indonesia and Vietnam. Although superior in all aspects of product quality, MPlastic failed to meet the customers' requirement for cheaper bags. On the average, MPlastic's cost of PP bags sold was RM7.10 per kg in Q2 2006 while the converters using imported Indonesian PP bags priced the bags at RM6.50 per kg.

3. To achieve cost leadership position, MPlastic would need substantial capital investment in order to achieve economies of scale. Based on a recent study, the cost of building a production capacity equivalent to 20% of the market size would need capital investment of a minimum RM30 million. Since the potential growth for PP bags was zero, the investment would therefore be highly risky.

4. Flat fabric was the most promising sector which was not saturated and had room to expand. Other than the conventional fabric for FIBC, MPlastic sold flat fabrics

for foil lamination, geotechnical application, tank lining and special industrial usage. In the applications mentioned, the fabrics were either imported from developed economies at premium prices or produced by only one to two local competitors. In order to penetrate the market, MPlastic collaborated and engaged with construction materials suppliers, earthworks and infrastructure consultants, chemical tank producers, awning, shades and umbrella manufacturers, etc., to jointly develop the fabrics they needed. These customers would produce and market the end products while MPlastic would focus on designing, producing and improving the fabrics.

Under this collaboration and future expansion in this sector, MPlastic would not require any capital investment. Since the flat fabrics could be sold between RM8.00/kg to RM13.00/kg according to their application, MPlastic could utilise its unutilised capacity, technology and know-how to gradually migrate its product range from commodity type to higher value products.

5. In the FIBC business, MPlastic had developed local and overseas customers to lessen its dependence on the Japanese customer. Other reasons for developing the FIBC business were:

   a. Small capital investment – it needed only about RM90,000 to purchase ten sets of sewing machines and one cutting machine to increase the capacity to 15,000 pieces per month.
   b. The additional 6,000 pieces of FIBC would require about 15 metric tons of flat fabrics, thus helping the utilisation of fabric production capacity.
   c. Possessed the know-how to produce food grade quality, non-static, contamination free, and other special usage FIBCs.

6. In the fabrics and FIBC sectors, MPlastic was able to compete in the global supply chain on product quality. However, it had to maximise its capacity utilisation in order to lower its fixed overhead costs and achieve a certain level of cost competitiveness.

   It was noted that to enter the global supply chain, the company would need to service a wider range of customers, broaden its customer base, and supply higher value products. It was not an option, but key to the survival of the company. The entry into the global supply chain was made possible by identifying and managing its intellectual assets in order to explore and exploit the company's competitive advantage.

Intellectual Assets

MPlastic had been privately owned since its incorporation. Its manufacturing facility and office were situated on a seven-acre land in an industrial park about 70 km south of Kuala Lumpur, the capital city of Malaysia. The facility, which was constructed in two phases in 1973 and 1992, respectively, had a total built up area of 200,000 sq. ft. It was installed with top of the range European extruders and weaving machines. This technological advantage in extrusion and weaving had given the company leadership position in the industry. However, while the company had maintained its leadership position since its inception, it had lost its cost competitiveness since 1994.

In April 2006, the Managing Director had identified the intellectual assets of the company together with the Plant Manager, Marketing Manager and Chief Accountant. The intellectual assets were in the form of human, structural and relational capitals. They were developed over a period of 33 years and were described as follows:

1. Human Capital

By 2006, about 20% of the 330 employees had worked with the company for more than 25 years, 50% between 15 to 25 years, 20% between 5 to 15 years and only 10% worked for less than five years. The Managing Director also noted that the middle-level managers carried a total of more than 90 years experience in PP bags and fabrics production, marketing, and product development. These managers were often invited and encouraged to participate in decision making as well as implementation of the company's short and long term strategies.

The high proportion of long-service and skilled employees had contributed to knowledge creation and served as the repository of knowledge within the company. The key skills and knowledge created in the process were in the areas of:

- Plastic resins and additives
- Yarns production
- Weaving
- Lamination and finishing
- Quality inspection and control
- Market and industrial knowledge
- Product development

Most employees, including the middle-level managers, acquired their skills and knowledge from overseas and local training and accumulated work experience.

The company had also implemented succession plan since 2001 to ensure systematic transfer of skills, knowledge and responsibility to the successors.

2. Structural Capital

All the company's products were certified under ISO 9001:2008 Quality Management System since 1994. The company had well documented procedures and work instructions on processes covered by the System. The day-to-day operations of the company were run on Enterprise Resource Planning (ERP) software, which was installed in 2004. Furthermore, there was semi-annual assessment of the company's business risks covering operations, financial, and environment according to the Enterprise Risk Management programme. The organisation was well managed in most, if not all, aspects of the business.

In addition, the employees had cultivated a quality conscious, continuous improvement, problem solving and creative attitudes. These attitudes were instrumental in helping the company to overcome many challenges encountered

in previous recessions in the 1970s, 1980s and the 1997 Asian financial crisis.

3. Relational Capital

MPlastic had transformed itself from a manufacturer of PP bags into a partner in collaborative manufacturing with overseas customers. The company had been the FIBC contract manufacturer for a Japanese company for twenty years. In 1999,the company was involved with two Australian companies in product design, material sourcing, trial run, sample development and product enhancement. Some of the special purpose products made for these Australian customers were grain cover, umbrella fabrics, awning fabrics, foil-laminated fabrics, and weed cover fabrics. MPlastic had just signed a scrim supply agreement with one of these two customers for long term development and supply of fabrics. This customer relationship was built through years of cooperation and trust.

Other than overseas customers, MPlastic had been servicing a few important local customers who placed consistent monthly orders. In this association, support (in terms of quality, delivery and services) and long-term relationship were given priority. The consistent orders arising from the relationship built up with these overseas and local customers would utilize about 55% of the production capacity of the company.

MPlastic also maintained good relationship with vital suppliers like resin producers and spare parts manufacturers to ensure that the company obtained the best support and pricing.

Decision Time

The Managing Director met with the Plant Manager, Marketing Manager and Chief Accountant whom he had invited to help him with an important decision and to formulate a sustainable and growth strategy. He started with the purpose of the meeting and then paused to ask two important questions:

1. Is there a future for PP-woven bag business in Malaysia, and is MPlastic competitive?
2. What is Mplastic's strategy for growth and sustainability?

The team had to leverage on each other's skills, knowledge and experience to draw up a proposal for the approval of the Board of Directors. To a large extent, intellectual asset management skills were needed for charting and executing the turnaround strategy for the company.