STRATEGIC MANAGEMENT AT ZHUJIANG IRON AND STEEL COMPANY

On a warm morning in January 2007, Ruosheng Zhang, president of Guangzhou Iron and Steel Enterprises Holding Limited (“GISE”), leaned back on the chair in his office on the 11th floor of the GISE building. He was contemplating what he had learnt and observed the day before at the annual meeting with senior and middle managers at the Guangzhou Zhujiang Iron and Steel Company (“ZISCo”), an important strategic business unit (“SBU”) within GISE. Zhang had been ZISCo’s president between 2003 and 2006 and was promoted to GISE in early 2006.

ZISCo performed reasonably well in 2006. It achieved approximately Rmb 180 million\(^1\) in profits despite the tough competitive environment in the Chinese steel industry and significant increases in the price of raw materials like scrap steel and energy. That was the third consecutive year in which the company had generated satisfactory profits since implementing its value creation strategy in 2003. However, growth slowed in 2006. Production reached its maximum capacity while several domestic competitors tried hard to copy ZISCo’s business model and marketing practices. Consequently, there was a debate during the meeting regarding the strategic direction ZISCo ought to pursue in 2007.

Would ZISCo concentrate on market or product development or, alternatively, focus on cost reduction and improving quality to increase its market share in existing markets?

What worried Zhang most, however, was that the organisational systems for strategic management were still not well established; the change in the organisational culture was slow and lagged behind the value creation strategy that had been implemented three years earlier. This raised another question: How could ZISCo sustain its competitive advantage strategically and operationally?

\(^1\) US$1 = Rmb 7.82 on 1 January 2007.
Zhujiang Iron and Steel Company

Company Background

Founded in 1997, ZISCo was one of China’s key national projects in the national Ninth Five-Year Plan and was also the first compact strip production (“CSP”) plant in China. The first production line was put into operation in August 1999 with a production capacity of one million tonnes of crude steel and sheet products. When the second production line was completed in February 2003, ZISCo’s annual production capacity reached two million tonnes of steel sheet products. It used scrap steel as the raw material for input into electric arc furnaces (“EAFs”) for steel-making. The hot liquid steel was then transferred to the refinery for further processing to achieve the chemical composition required for different types of steel. The refined liquid steel was then filled into a continuous casting and cooling machine to be turned into steel slates, which went through a heating oven. Six rolling machines pressed and rolled steel slates into steel sheets of different thicknesses as specified by customers [see Exhibit 1 for a brief description of the entire production process].

The hot-rolled steel sheets were used in the manufacturing of containers, industry-used gas bottles, steel pipes, white good appliances and automobiles. The chemical composition and the thickness of the steel sheets determined their usage and prices.

The CSP Research Centre within ZISCo had successfully developed several new products since 2000. One example was the thin steel sheets used for making standard shipping containers. Each standard container was assembled from about 1.5 tonnes of steel sheets of various thicknesses and widths. The scrap steel used by ZISCo usually contained copper, nickel and corium, which were required in container-used steel products for anti-corrosion. However, these metals created difficulties in the continuous casting and product rolling processes for thin steel slabs. Thus, the manufacturer of CSP equipment, which ZISCo imported, specified that steel slabs which contained these metals exceeding the given level could not be used for producing thin steel sheets. Nevertheless, the engineers at ZISCo recognised the opportunity to use such scrap steel as raw materials to produce steel sheets for use in containers and successfully mastered the technical know-how for their mass production in 2003.

Organisational Structure

ZISCo’s organisational structure was significantly different from that of a traditional state-owned enterprise (“SOE”), which was put in place to cope with the new business environment in China in the mid-1990s. Many traditional Chinese SOEs had two separate administrative systems: political (for example, party secretaries) and managerial at the top and functional level. ZISCo had only two party secretaries at the company’s top level. The party secretary at the company level also held the position of the chairman of the board of directors, and the deputy party secretary was in charge of all other daily traditional political affairs of the party, the Communist Youth League and the worker’s union. This position was usually shared by two or three positions in a typical Chinese SOE. All functional heads at ZISCo also held the position of party secretary at their function. This structure, to a great degree, facilitated co-

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² The Ninth Five-Year Plan was developed by the Chinese government for the period of five years from 1996 to 2000. The Chinese government developed its first Five-Year plan in 1956, covering the period 1956–1960. This plan specified all the major investment projects approved by the government. Since then, such plans have been developed every five years to cover a period of five years. The projects listed in the plans are usually of national significance.

³ Compact strip production is a modern steel strip production technology where hot liquid steel is cast continuously into a thin gauge, passed into a reheating furnace and then rolled into thin strips or sheets. It is a key steel rolling process used in steel mini-mills such as Nucor.

⁴ Communist Youth League is a political organisation for young people in China.
ordination and communication between the party and management at ZISCo, particularly at the functional level.

ZISCo also outsourced most of its auxiliary services, thereby limiting the total number of employees to about 600. Most of these employees held university qualifications [see Exhibit 2 for ZISCo’s organisational structure].

**Financial Structure and Performance**

The total capital investment in ZISCo was over Rmb 5 billion, with 70% of the investment being financed by bank loans. The annual interest on loans amounted to about Rmb 300 million. This huge financial cost imposed a heavy burden on the company. During the period 1999–2002, ZISCo merely achieved a break-even position and was not profitable. The poor financial performance was attributed to high financial costs, low-margin products and high procurement costs.

**Reviewing the Business Strategy**

In 2003, ZISCo’s management called a series of meetings to investigate the causes of poor financial performance. After five months of discussion and analysis, it was found that problems existed in five areas: business strategy, production, sales, procurement and human resources.

Prior to 2003, ZISCo pursued a differentiation strategy with a focus on domestic niche markets by manufacturing products that its competitors did not want to produce because either they were small orders or were difficult to make. This strategy was, to a large degree, a result of its organisational context rather than a wilful strategy. Since operations commenced in 1999, ZISCo had had a high cost structure because of the high cost of electricity and steel scrap in China. Additionally, ZISCo had been a new entrant in the steel sheet market with an annual output of one million tonnes of products. Developing distribution channels for such a large volume of output had been very difficult in its early days. Thus, ZISCo had pursued a niche differentiation strategy. It had produced a wide variety of conventional and new products and had sold them to a large number of customers from niche markets.

Although the niche differentiation strategy offered ZISCo various competitive advantages (including the ability to charge premium prices and creating high barriers to imitation), it had several limitations. Firstly, this strategy made it difficult to achieve economies of scale because orders from niche markets were typically very small. Moreover, new product development was usually a costly and lengthy process, which could only be justified with a mass volume of production.

Secondly, such a niche (or over-focused) differentiation strategy also required a high level of production co-ordination. The huge variety of products necessitated frequent changes in production processes. This, coupled with teething problems in co-ordinating two production lines, increased not only the production costs but also the number of equipment breakdowns. These problems resulted in low product quality and production delays.

The niche differentiation strategy also increased selling costs because of the difficulties in co-ordinating sales and distribution channels and in managing the large number of small sales orders. On the procurement side, the company had to place small orders for a variety of raw materials with small intermediary suppliers rather than manufacturers. This increased inventory costs and reduced the company’s bargaining power with suppliers.

ZISCo also faced various problems in co-ordinating the second production line. These problems were further exacerbated when the German engineers responsible for trial
production of the second production line were evacuated during the SARS crisis in 2003.

It was obvious that the advantages of pursuing a niche differentiation strategy were largely offset by the high costs of production, sales and distribution, procurement, and insufficient orders. Staff morale was also low. In March 2003, Zhang was appointed as the new president of ZISCo. A new party secretary and chairman of the board was also appointed to ZISCo at the same time. The challenge for Zhang was how to develop and implement a new strategy to improve ZISCo’s long-term competitive advantage.

Developing and Implementing a New Business Strategy

The strategic management process at ZISCo was redefined by the new management in March 2003. The process could be divided into three stages. Stage One involved the establishment of short-term objectives to improve the production process, product quality and key functional performance. Stage Two related to the implementation of strategy to consolidate functional performance, and to improve cross-functional co-ordination and integration. Stage Three involved continuous integration and capacity building. Each stage focused on different strategic issues as illustrated in Exhibit 3.


Setting and Prioritising Short-Term Functional Objectives

When Zhang took the helm of ZISCo in March 2003, his first priority was to increase production output to reach the designed capacity while maintaining product quality. On strategy implementation at ZISCo, Zhang remarked:

_The production, marketing and procurement functions were poorly managed at ZISCo in 2003. There were frequent break-downs during the production process. Product quality was low; supplies were not in place. I had to go to the plants for ‘fire-fighting’. Customers had many complaints about our products and services. Our marketing people did not know what products had potential. They had not developed the right channels for our product distribution. My thought at that time was to focus on production. If I could first solve problems in this area, I could then tackle problems at procurement and marketing because I could leverage our improved scale of production in negotiating with suppliers and customers._

From a company-wide perspective, the focus was on cost reduction in all functions. However, the priorities in 2003 were to increase production volume and improve product quality. Accordingly, a short-term objective was set to reach 90% of the company’s designed production capacity by September 2003.

Increasing Production Volume and Improving Product Quality

In August 2003, assistant president Zhiru Xu was assigned to assist Zhang in production (and was promoted to vice-president in 2004). He had 18 years of work experience with a background in steel rolling. He spent most of his time in the plant and knew the middle managers and frontline workers very well. Under the leadership of the new management, ZISCo managed to increase its production volume to 140,000 tonnes per month (that is, 80% of production capacity) by the end of 2003. Although product quality remained a problem, ZISCo had successfully reached its designed capacity. There was significant improvement in co-ordination between the production, technology, equipment and maintenance departments.

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5 Source: interview with Zhang
as well as between the two plants—steel making and steel rolling. Increasing production volume by tackling technical problems in the production process (including quality) and cross-functional co-ordination were the major short-term objectives in 2003.

The improvement in production was accompanied and supported by a change in the organisational structure, control and incentive schemes, and other factors.

**Change in Organisational Structure**
A new functional department, product quality, was established in 2003 to focus on product quality and customer co-ordination. The automation department was dissolved in 2003 and its function was transferred to the IT and equipment departments.

**Developing Control and Incentive Schemes**
Several performance appraisal and incentives schemes were launched during 2003, including annual performance appraisals for production, sales and profit. The salaries of top and middle managers were linked to the financial performance of ZISCo on a monthly basis. Additionally, several special incentive schemes for front-line employees were launched to encourage the production of thin steel sheets (products in high demand by the container industry with a relative high profit margin), production productivity and product quality control in co-ordinating two production lines. Moreover, ZISCo had reformed its salary systems in both the steel making and steel rolling plants to make them more performance based.

**Other Improvements in the Area of Production**
Between March 2003 and June 2004, the key managerial achievements were increased output, improved procurement management, and a change in marketing strategy. Various functional activities supported the achievement of these results, for example, the product cost audit conducted by a team led by the finance department. In addition, ZISCo’s enterprise resource planning (“ERP”) system was improved by incorporating more functions into the system, such as sales, materials supply and production schedule. The developments in ERP and the outcome of cost auditing for each major product laid a solid foundation for functional co-ordination and production decision-making.

A cross-functional team was set up in September 2003 (two people from accounting, one from production and one from technology) to analyse the costs of every major product. The team produced detailed analyses of costs for each product specification, which were used as benchmarks for cost reduction and as key input for production planning.

**Improving Performance in Other Key Functions**
As production was stabilised and improved toward the end of 2003, president Zhang started to deal with issues in the areas of procurement and marketing. He considered these two areas to be critically fundamental in the company’s value chain, cost structure and financial performance.

**Procurement**
The primary targets for the materials supply department were to reduce the material procurement costs and to stabilise supply sources via consolidation of its supply base. ZISCo’s annual procurement spending at that time was approximately Rmb 8 billion. This included raw materials such as scrap steel and alloys, refractory materials for steel-making furnaces, and equipment parts. Prior to 2004, the supplier base was very fragmented. Procurement was outsourced to the Material Supply Company (a subsidiary of GISE) with ZISCo’s department of materials supply forwarding procurement orders and receiving them once processed. The Material Supply Company then charged ZISCo a commission based on the percentage of procurement spending.
As production scaled up, procurement bottlenecked towards the end of 2003. To tackle this problem, Zhang established a new functional strategy. At the beginning of 2004, the materials supply department was asked to become more involved with the procurement decision-making process and to improve performance by reducing the number of suppliers. A guiding principle—to undertake 80% of procurement from the top 20% of suppliers—was established in order to consolidate the number of suppliers. Top management at ZISCo believed this could be a win-win solution for ZISCo and its suppliers. In addition, the department of materials supply was required to lower its inventory levels to reduce inventory costs and improve ZISCo’s cash flow. Efforts in this area saw consolidation of the supplier base, significantly lowered procurement costs, and secured and stabilised key material supplies by the end of 2004.

Marketing

The marketing function was left untouched in the early stages of strategic reforms, until early 2004. As production increased and supplies stabilised, marketing issues were listed higher on the management agenda. The new marketing focus was to replace the niche marketing strategy with a strategy of targeting relatively large market segments to better match ZISCo’s production capacity.

In September 2003, Zhang received complaints made by several large container buyers about the quality of ZISCO’s products from a major Chinese container manufacturer. In addition, the container manufacturer also grumbled about ZISCo’s poor after-sales service and long delivery time. This was a potential crisis for ZISCo and had to be dealt with urgently. Zhang led a team to visit the container manufacturer and gave his personal assurance that 90% of the problems raised would be solved within three months. After making several field visits to the customers, Zhang gained a deeper understanding of the needs of the container manufacturers. He believed that it was appropriate for ZISCo to tap the lucrative container market given its market size, material requirements (steel sheets), geographical proximity, and ZISCo’s production capacity and technical competence.

In late 2003, Zhang took over the marketing role after the departure of the vice-president of marketing. Zhang was eager to improve cross-functional communication and co-ordination, particularly between the marketing, production, and procurement departments, and more importantly, to promote the marketing concept at ZISCo.

In mid-2004, ZISCo began to target the Chinese container manufacturing industry by offering Chinese container manufacturers a one-stop-shop service. Typically, container manufacturers required several specifications of steel sheets and an appropriate mix of them to assemble a container. Previously, almost all the Chinese container manufacturers ordered different specifications of steel products from several domestic steel producers, or imported superior quality products from overseas. This procurement strategy resulted in increased procurement costs and difficulties in co-ordinating inventories.

ZISCo’s one-stop-shop services were well received because such services added substantial value to customers. ZISCo also guaranteed on-time delivery to customers. The timing of ZISCo’s new marketing strategy coincided with a global increase in demand for container-used steel products in 2004.


Strategy Formation and Launch

The annual retreat for senior and middle managers at the beginning of 2004 provided the forum for the new strategy formation. Participants were asked to review the company’s
achievements in 2003 and to discuss what should happen in 2004. Dubbed as the “Ideology Discussion meeting”, three major problems were identified. Firstly, that ZISCo had nearly reached its designed capacity, but its financial performance was still not satisfactory. Secondly, that ZISCo had to rely on itself, instead of government assistance, to compete in markets. Thirdly, that ZISCo had to change its business strategy. However, it was not clear what strategy it should pursue.

In early 2004, Zhang started addressing the strategic issues systematically at ZISCo. Armed with his knowledge of ZISCo’s internal competence, strategic analytical tools acquired from his MBA studies, and work experience, Zhang launched the business strategy at ZISCo’s annual Science, Technology and Management Forum in July 2004. He detailed the outcomes of his strategic analyses and the reasons why that particular value creation strategy had been selected.

Strategic Analyses
Zhang’s strategic analyses focused on four areas: the mission of the company, competitive environment, internal value chain activities, and the driving forces of organisational performance at ZISCo.

Zhang believed that ZISCo could achieve sustainable growth through continuous value creation. The competitive environment analysis primarily focused on a comparison of the strengths and weaknesses of ZISCo in relation to its competitors. The value chain activity analysis demonstrated the importance of activities integration.

An important part of the strategic analyses was related to the driving forces and barriers for ZISCo’s economic performance. It highlighted employee concerns about the impact of ZISCo’s financing structure on its performance and elaborated how value creation could improve ZISCo’s economic performance and thereby enhance employee confidence in ZISCo’s future.

The Strategy and its Selection
The reasons for selecting value creation as ZISCo’s business strategy were explained by Zhang in his speech at ZISCo’s annual Science, Technology and Management Forum in July 2004 after he examined the pros and cons of cost leadership and differentiation strategies, and gained a better understanding of the concepts of value and the characteristics of value chain activities at ZISCo.

Zhang proposed that the value creation strategy was the most appropriate for ZISCo after briefly analysing the characteristics of cost leadership and differentiation. This new business strategy could involve all functions of the company and was deemed to be more flexible than cost leadership and differentiation because it contained two aspects of value creation: creating value for customers through marketing and new product development, and creating value for the company through cost reduction in all functions. Ultimately, it could create value for the employees as their performance measures would be linked to the company’s performance.

The goal of ZISCo is value creation. Based on the principle of value creation, ZISCo should develop innovative managerial and enterprise management concepts, implement value creation strategy, develop systems for corporate governance, cultivate core competence, and create further value for the organisation, its customers, and its employees.5

Zhang highlighted several major issues in implementing the value creation strategy. These

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included systems, controls and incentives and other campaigns. Some of these were conceptualised as follows:

- A company-wide effort in concept innovation for value creation, stressing the need for employees to be involved, and to develop and contribute new ideas for value creation
- A short-term plan for value creation, summarising the major operational activities for value creation from July 2003 to June 2004, and setting short-term objectives for the next 12 months, covering production, new product development, procurement, marketing and finance
- Performance appraisal schemes, linking value creation to employees’ performance
- Employee development schemes, outlining the career path for employees and managers
- Innovation incentive schemes, encouraging employees to take part in technical and managerial innovations
- Other schemes including communication and corporate image schemes.

**Strategy Launch**

The value creation business strategy was formally launched in July 2004 by Zhang in his half-yearly report shortly after the annual Science, Technology and Management Forum. During March 2003–June 2004, the value creation strategy was implemented quite successfully. Zhang considered that it was the appropriate time to formally communicate the new business strategy to all staff and managers.

The new strategic priorities were to establish a new business model; integrate the cross-functional activities of marketing, production and procurement; consolidate the achievements; and improve functional activities. ZISCO’s business model was becoming increasingly clear—which products could make profits and what volume could be produced based on costs, market conditions and production capability was now obvious.

**Strategy Implementation, Focusing on Cross-Functional Co-Ordination and Integration**

**Establishing New Decision-Making Processes for Cross-Functional Integration**

ZISCO established a new system for setting the prices for products and scheduling short-term production. A team, which consisted of the president and the heads of production, technology, accounting, steel making, steel rolling, material supply, and marketing, met regularly to discuss what product mix should be produced next. Using the template generated by the cost auditing team, the team analysed inputs of product prices, raw material supplies and their costs, production capacities, and other overheads. This not only ensured the maximisation of profits for the next period but also co-ordinated and integrated cross-functional activities. Managers from marketing, production and supply could understand how and why production was scheduled in a certain way.

**Human Resource Management: Control and Incentives**

ZISCO engaged a local university (Sun Yat-sen University) to establish new human resource management policies, and performance appraisal and innovation incentive schemes to support the new business strategy. The consulting team from the university had frequent interaction with the top and senior management of ZISCO and worked closely with the administrative office. This project resulted in the formal publication of the new business strategy and documentation of several new control and incentive systems, including ZISCO’s performance appraisal scheme, employee salary scheme, employee promotion scheme (dubbed “Sunshine Passage”), and innovation incentive scheme. Each scheme focused on different aspects of human resource management to ensure that all employees worked harmoniously to achieve
the organisational goals.

Establishing a New Organisational Structure
An additional type of organisational structure, a project-based structure, was established in 2004 to facilitate cross-functional co-ordination. Once a project was identified, a project team was formed. Each team was headed by a project manager and it comprised people from different functions, depending on the nature of the project.

Communication and Leadership

Communicating Strategy
Communicating the value and benefits of the new business strategy was not an easy undertaking at ZISCo. Traditionally, Chinese SOEs operated as workshops under the Chinese planned economy. The Chinese government usually set the prices for most industrial products. Thus, lowering costs was seen as the only way to improve a firm’s financial performance. The value and belief in cost reduction was deeply embedded in the minds of Chinese SOE employees and this made it relatively easy to direct employees towards cost reduction. However, communicating the new strategy emphasising market orientation required a dramatic change of employees’ values and beliefs.

Communication between Zhang (as the strategy initiator) and functional managers occurred mainly in an informal manner. Zhang preferred making field visits to ZISCo’s plants and functional offices to communicate the new strategy to the managers. Face-to-face meetings were particularly effective for communicating complicated issues and strategic actions, which were subject to changes. Given that ZISCo only had two plants and less than ten key functional departments, Zhang could do this personally.

Frequent informal communications between Zhang and his top and middle management helped to clarify the strategy and translate strategic concepts into functional strategies. As Zhang described:

\[ I \text{ have made frequent visits to many middle managers’ offices to discuss the value creation strategy and how it was related to various functional activities, such as steel making, steel rolling, and procurement. I have also made myself available to the middle managers. They could walk into my office to talk to me if necessary.} \]

A complete set of documents for the new business strategy and various supporting schemes (performance appraisal, innovation incentive, employee promotion scheme) was published as joint reports by ZISCo and the consulting team from the local university at the end of 2005. These documents were distributed to every functional department within ZISCo, and a booklet was distributed to every employee communicating formally the strategy contents and its supporting schemes.

Leadership Style and the Role of Middle Managers
Leadership was very important to strategy implementation. In general, leadership could be categorised as charismatic and instrumental or transactional. A charismatic leader takes personal responsibility and focuses on the building of a vision and development of strategy for the organisation, while an instrumental or transactional leader concentrates on the development, communication and monitoring of set performance and control outcomes to achieve uniform organisational or group behaviour and standards.

Zhang played a significant role in strategic analysis and strategy formation. He delegated

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7 Source: interview with Zhang
most of the production implementation responsibilities to the vice-president of production, and marketing and procurement duties to the functional managers, although he was directly in charge of marketing and procurement. However, he was in constant contact with the middle managers and the front-line employees.

The middle managers at ZISCo played a crucial role in implementing ZISCo’s value creation strategy. They translated the company’s business strategy into operational goals and activities. For example, the head of the steel rolling plant compiled a booklet on how certain steel rolling processes could contribute to value creation within the company. The steel making plant published regular internal documents and newsletters to communicate the company’s business strategy and to motivate its employees in implementing it. In the energy department, the functional head used a variety of ways to evaluate employees’ performance in terms of cost savings, and motivated them to achieve such goals. The middle managers knew their employees well and were very competent in people-related issues. They also sent feedback to the senior management team.

**Developing a New Organisational Culture**

The paradigm of organisational culture at ZISCo before the implementation of the new business strategy could be described as being production-oriented, having a technology leadership, and seeing an improvement of financial performance through cost reduction. Using the cultural web suggested by Johnson (1992), the aspects of the organisational culture at ZISCo before 2004 could be summarised in Exhibit 4.

ZISCo’s organisational culture stemmed from its early history. When ZISCo was established in 1997, an overwhelming majority of ZISCo’s employees came from Chinese SOEs. Most Chinese SOEs were production-orientated due to the long history of the Chinese planned economy, under which a typical Chinese SOE operated as a production unit. Although the enterprise management system had been reformed since the early 1990s, such a production-orientated paradigm could not be expected to change quickly. Consequently, many SOEs still considered cost saving as the only way to improve economic performance. However, the technology leadership at ZISCo was unique because ZISCo used the first state-of-the-art CSP technology in China. Thus, its key stakeholder, the local government, also expected that it play a technologically leading role in the Chinese steel industry.

One of the fundamental requirements for ZISCo when implementing the new strategy was to change its organisational culture from being production-orientated to value-creation-orientated, which required a shift from a production- to market-orientation. This presented a big challenge for the top management as the production-orientated paradigm was deeply embedded in employees’ minds. The positive side for such a cultural change was the high level of education among employees, as most had received tertiary education. Thus, they were more receptive to cultural change given that they were better educated. The desired organisational culture is described in Exhibit 5.

Changing the organisational culture focused primarily on the behaviour control and incentives, routine and rituals, and good stories communicated to employees. ZISCo launched several new initiatives to encourage employee participation in strategy implementation. For example, a “Golden Ideas” campaign was launched in 2003. It aimed to encourage employees to reduce costs in their daily routine and activities. Specifically, it was designed to lower costs in production-related areas and to reduce production wastage. Incentive schemes were also set up to reward employees for their ideas that were accepted and implemented with improved performance. This motivated employees to participate in creating value for the company and improving their daily operational activities.

Another campaign, known as “Productivity Contest among Three Shifts”, was launched in
2004 in the steel making and steel rolling plants. The output for each shift was immediately published and the winning shifts were rewarded by top management in various ways. Management organised small parties for the winners, or distributed shopping vouchers and bonuses to them. The purpose was to acknowledge their contributions to quality improvement and productivity. The results were very impressive as many employees were keen to win the contest and spent considerable time and effort working towards the improvement of product quality and productivity.

The importance of middle managers in cultivating the desired organisational culture could not be ignored. To recognise the role of middle managers in changing employee behaviours, a sizeable apportioned bonus was allocated to the functional heads for rewards at their discretion.

**Continuous Consolidation of Functional Improvement**

ZISCo also saw significant improvement in other functions. For example, the department of energy successfully lowered energy consumption (electricity, gas and oil for production) through benchmarking and target setting, and the department of finance reduced interest charges and improved the company’s cash flow position.

Consolidating what had been achieved in production in terms of productivity and product quality was a vast undertaking and challenge for ZISCo. Consolidation would ensure the continued success of the value-creation strategy implementation and financial performance, as well as enhance employee morale.

Nevertheless, a severe quality problem occurred in the container-used products in mid-2005. Subsequently, a quality manager from a major client was invited to ZISCo to talk about quality problems. Zhang was directly involved in dealing with the client’s concerns about the quality problems. This showed the senior management’s commitment to product quality and customers’ needs.

**Stage Three: Continuous Improvement and Consolidation in Implementing the New Strategy (January 2006–May 2007)**

Several changes in the senior management team occurred in February 2006 as Zhang left ZISCo to take up the position of president of GISE. The former vice-president of production was promoted to president, and the former chief engineer took over the position of the vice-president of production. A number of new initiatives were implemented after that, including a further integration of the supply chain in raw materials, better co-ordination with customers, improvement of thin steel product production, and an increase of the productivity of the flattening equipment to create more value for ZISCo.

**Further Integration of Raw Materials Supply Chain**

The supply chain of scrap steel was further integrated in 2006. ZISCo purchased around two million tonnes of scrap steel every year. Previously, the supply base had been very fragmented. This created problems in terms of supplier co-ordination, order processing and quality inspection.

A contract was successfully signed between ZISCo and a major supplier of scrap steel in 2006. The supplier not only supplied all scrap steel for one of the two steel making furnaces at ZISCo but was also paid on the basis of the amount of steel produced in that furnace. This was a win-win deal for ZISCo and the supplier. For ZISCo, it eliminated costs in quality inspection, inventory control, and procurement processes and gained a reliable supply of steel scraps. The supplier was able to leverage the contract size with ZISCo when purchasing scrap steel from smaller suppliers.
Improvement of Production Capacity of Thin Products

One of the core competitive advantages for ZISCo was its ability to provide one-stop-shop services for container manufacturers. This required ZISCo to produce an appropriate mix of all specifications of products needed by the container manufacturing industry. Such a mix required about 50% of thin steel products (thinner than two millimetres). Thin steel products were more difficult to produce than thicker ones but they could be sold with relatively higher profit margins. The continuous improvement in the production process for thin steel products had increased to over 50% by June 2006. As a result, ZISCo could supply more thin steel products to its customers, thereby further improving its competitive advantage and financial performance.

Enhancing the Capacity of the Flattening Equipment

The thin steel sheets had to be flattened before they were delivered to customers. These flattened products could be sold for Rmb 50 more than the original price (those which had not been flattened). ZISCo had only one unit of flattening equipment with a design capacity of 65,000 tonnes per month. This created a bottleneck in providing one-stop-shop services to container manufacturers as ZISCo increased its supply of container-used steel products. To overcome this problem, early in 2006, the steel rolling plant was split into two separate plants, steel rolling and finished product, to improve product quality and facilitate delivery. A technical team within the finished product plant was set up in March 2006 to investigate how to increase the capacity of the flattening equipment and it successfully mastered the know-how by June 2006. The processing capacity of the flattening equipment was increased by about 30,000 tonnes per month, thereby potentially adding about Rmb 1 million of profit to ZISCo every month.

Achieving Win-Win Solutions by Better Understanding Customer Needs

The integration of ZISCo’s value chain with its customer consumption chains was further strengthened in 2006. An example of this was the sale of non-customised products. These non-customised products were by-products in the production of customised products. For example, if the product ordered by a container manufacturer was a two millimetre sheet, ZISCo had to produce a four millimetre sheet first, then three millimetre and finally two millimetre because the rolling machines had to be warmed up and the rolling gauge had to be adjusted gradually from four millimetres to two millimetres. During this warm up period, some by-products or non-customised products were produced. Previously, these by-products had been sold to customers at a discounted rate because they did not exactly meet the customer’s specifications on its thickness (for example, two millimetres). Because of frequent interaction with customers, ZISCo had a better understanding of customers’ needs and it found that some customers could use these non-customised products to replace some of the standard (or customised) products. This brought value to ZISCO as the reconceptualised products could be sold without a price discount.

Challenges of 2007 and Beyond

Although the new business strategy had been implemented at ZISCo since 2003 and had achieved quite a satisfactory outcome, there were still several challenges facing senior management in early 2007.

The first challenge was the need to cultivate a new organisational culture to support value creation at ZISCo. Employees had to understand the meaning of value creation in their daily operation and activities. They had to understand how they could create value for the customers as well as the company. Traditional values of being production-oriented, focusing on cost-cutting and having a production expansion strategy were deeply embedded in most Chinese SOEs. Although there was nothing wrong with having such traditional values, it was...
true that the nation was moving from a planned economy to a market economy, and hence companies had to adopt a market-oriented culture that emphasised customers’ needs and emphasise the development of innovation. The task of establishing a new market-oriented culture while preserving traditional values was a major challenge for ZISCO’s senior management.

The second challenge was how to continuously discover, understand and exploit insights about value creation to create further competitive advantages. In the early stages of implementing the new strategy, emphasis was placed on all activities that had potential for value creation. Such a comprehensive coverage at the early stage of value creation was effective and efficient as there was a great deal of potential for value creation in all areas or functions. As progress was made in implementing value creation, the business activities and processes improved or became better co-ordinated. However, the identification of strategically important areas for value creation was still required to further improve organisational performance.

The third challenge was how to sustain the competitive advantage that had been achieved so far at ZISCO which had gained the first-mover advantage. For example, it introduced the first CSP technology in China, and went through a major learning curve in regards to production. It was also the first steel manufacturer to provide one-stop-shop services to container manufacturers, hence establishing good relations with them. Furthermore, it was the first company in the Chinese steel industry to implement a value creation strategy. Such a learning curve could be an important source of competitive advantage. However, as several competitors had also imported CSP technologies over the past four years, these competitive advantages could actually be diminishing.

Several areas had been targeted in order to maintain ZISCO’s competitive advantage. These included the organisational culture, capability in new product development, the ability to provide a full range of products for customers, and excellence in delivery and customer service. These may be regarded as ZISCO’s core competences. How to leverage these core competences and develop them to sustain a long-term competitive advantage was the biggest challenge facing ZISCO within the rapidly developing Chinese market for steel products.

The final challenge was to learn and develop organisational capability to manage the organisation strategically. Strategic management was still new to many managers in Chinese small- and medium-sized enterprises. Since implementing the new business strategy, ZISCO had been actively learning and practising strategic management. How such learning and practising could be systematically mapped out and improved so as to strategically build the organisation’s capability of learning and managing strategically was another major issue on the management agenda at GISE and ZISCO.

Reference

EXHIBIT 1: THE PRODUCTION PROCESS AT ZISCO

Source: Supplied by ZISCo.
EXHIBIT 2: THE ORGANISATIONAL STRUCTURE AT ZISCO

Party Secretary

Deputy Party Secretary and Chairman of Worker Union

Vice President and Chief Engineer

President

Steel making

Steel rolling

Finished products

Quality inspection

Production

Equipment

Technology

Energy

Computer Centre

Personnel

Planning and Accounting

Materials Supply

Marketing

Administration Office

Party Administration Office

Worker Union

Youth League
EXHIBIT 3: THE STRATEGY DEVELOPMENT STAGES AND KEY STRATEGIC ISSUES AT ZISCO


Stage Three: Continuous Improvement and Consolidation Implementing the Strategy (January 2006–May 2007)
## EXHIBIT 4: THE CULTURAL WEB AT ZISCO BEFORE IMPLEMENTING VALUE CREATION STRATEGY

<table>
<thead>
<tr>
<th>Aspects</th>
<th>The cultural web at ZISCO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stories</td>
<td>New product development awards; process control awards; first compact strip process (CSP) technology in China; state-of-the-art technology; technology competence</td>
</tr>
<tr>
<td>Routines</td>
<td>Production was highly emphasised; not market-oriented; hard working; development of technical expertise</td>
</tr>
<tr>
<td>Rituals</td>
<td>Annual Science, Technology and Management Forum; new production output records; technical training; “production-procurement marketing”</td>
</tr>
<tr>
<td>Symbols</td>
<td>State-of-the-art technology; CSP technology leader in China; technology expertise</td>
</tr>
<tr>
<td>Control systems</td>
<td>Production output; process equipment breakdowns; cost saving</td>
</tr>
<tr>
<td>Power structure</td>
<td>Production was regarded as the most important function, a view strongly held among the top and middle management. At the organisational level, power was shared by the president and the party secretary. These two positions were appointed by GISE and approved by the municipal government</td>
</tr>
<tr>
<td>Organisational structure</td>
<td>A flat functional organisational structure that facilitates communication between the top management and functional managers, but inhibits cross-functional co-ordination</td>
</tr>
<tr>
<td>The paradigm</td>
<td>Production-oriented; technology leadership; improvement of financial performance through cost reduction</td>
</tr>
</tbody>
</table>
### EXHIBIT 5: THE DESIRED ORGANISATIONAL CULTURE FOR ZISCO

<table>
<thead>
<tr>
<th>Aspects</th>
<th>The cultural web at ZISCo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stories</strong></td>
<td>Customer satisfaction; new product development launched; profits; market shares</td>
</tr>
<tr>
<td><strong>Routines</strong></td>
<td>Market oriented; cross-functional co-ordination and integration; development of marketing and technical expertise</td>
</tr>
<tr>
<td><strong>Rituals</strong></td>
<td>Marketing and management training; annual Science, Technology and Management Forum; marketing involved in major decision-making; “marketing-production procurement”</td>
</tr>
<tr>
<td><strong>Symbols</strong></td>
<td>One of the most profitable CSPs in China; CSP technology leader; technology expertise</td>
</tr>
<tr>
<td><strong>Control systems</strong></td>
<td>Profitability; new product development; cross-functional integration; cost reduction</td>
</tr>
<tr>
<td><strong>Power structure</strong></td>
<td>Marketing becomes the most important function. Production becomes a key function</td>
</tr>
<tr>
<td><strong>Organisational structure</strong></td>
<td>A flat organisational structure that could enhance cross-functional co-ordination; more emphasis on project structure</td>
</tr>
<tr>
<td><strong>The paradigm</strong></td>
<td>Market-oriented; technology leadership; improvement of financial performance by meeting customers’ needs and lowering costs</td>
</tr>
</tbody>
</table>