Major (NS)\(^1\) Wong became the newly-elected president of the Institute of Printing (IOP) on 23 March 2001. He felt that the IOP - the Asia Pacific's professional body for printers and those in related trades - could contribute more than it was doing to the Singapore printing industry, especially in terms of manpower skills development. Although Major (NS) Wong had vaguely identified vocational training as a niche service that the IOP could provide leadership in, he also found himself wondering if the IOP might not play other roles within the industry. As the new executive committee was scheduled to meet in a month's time, Major Wong needed to firm up his strategies fast.

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1. "NS" stands for National Serviceman. Major (NS) Wong is currently serving the Singapore Armed Forces as a National Serviceman.
THE INSTITUTE OF PRINTING (ASIA-PACIFIC)

The Institute of Printing (Asia-Pacific) in Singapore, commonly known as the IOP, was registered in 1998 as a professional body for printers and those in allied trades. It was founded with the aspiration of being the professional body for Singapore's printing industry. The founding members - a group of Singapore-based printers - were members of The Institute of Printing (UK). They were disillusioned, feeling that their association with this foreign professional body had not produced any meaningful or tangible benefits for them. They now wanted to create a local independent professional body to take care of their interests. They thus formed the Institute of Printing (IOP). IOP's objectives were mainly to provide technical information and education to help members advance in their careers. (Details are shown in Exhibit 1.) It aspired to be an association "for the printers by the printers".

THE PRINTING INDUSTRY IN SINGAPORE

The printing industry in Singapore was highly fragmented. Companies were diverse both in terms of size and in the activities in which they specialized. Some had full printing capabilities, from pre-press to post-press stages, while some chose to specialize in just one or two of the broad stages of printing, or even in just one activity. (See Exhibit 2.) Companies without full print capability needed to procure the services of others to complete jobs for their customers. The former constituted the core of Singapore's print industry. Companies supplying printing presses and printing-related goods were also part of the industry in a broader sense.

The Singapore Department of Statistics did not distinguish the printing industry from the publishing industry. Its 1999 Yearbook of Statistics showed that 400 establishments were operating in the printing and publishing industry in the country. Collectively, these industries employed 19,439 workers, and generated S$2,997 monthly per worker. The size of printing companies varied greatly when measured in terms of number of workers. These ranged from just over 10 workers per company to several hundred. A mid-sized printing company typically employed 40 to 50 workers.

BUSINESS CLIMATE

Business competition in the printing industry was high. A printer's efficiency and printing capability for each product market segments depended very much on the machinery configuration. Within a product market segment itself, however, there was actually little differentiation as almost every printer could achieve the same level of quality and delivery speed.

Printing presses and related equipment were very specialized. A shortage of the highly trained manpower needed to operate such equipment had forced the industry to employ workers mostly from Malaysia, China and India. Managers in the industry were mainly veterans who had risen to their positions from the rank and file. Few companies, except the very largest, employed professionally-trained managers.

The cost structure of each printer differed vastly. Larger printers using newer equipment tended to have the advantage in quality and efficiency but at the expense of heavy depreciation. To gain sufficient volume for fixed-cost recovery, larger printers often went below cost to take on jobs. At the other extreme, some smaller printers were using fully-depreciated old equipment. They set price levels to exclude equipment costs so as to survive in the overly crowded Singapore market. As such, the industry faced extreme price pressure, and rivalry was intense. The larger players had resorted to overseas market penetration or diversification into related markets for growth. The smaller printers with low resources and no niche advantages could only increase service levels continually to keep their existing clients. This strategy not only eroded industry profitability but also cultivated the demanding attitude of print buyers, making the printing business more and more difficult.

MAIN CUSTOMERS

The industry supplied a vast array of product market segments. (See Exhibit 3.) Major print buyers included book and magazine publishers, advertising agencies, government bodies, and corporations.

Publishers and advertising agencies were professional print buyers. They knew the market rates well and were extremely fussy over quality. They also had a tendency to push printers hard on delivery speed to gain more time for their own share of the work in the final product. Government bodies meanwhile ordered their printing needs exclusively through a tender process. Corporations on the other hand, tended to use advertising agencies for most of their marketing printing needs but ordered items like annual reports and stationery direct from printers.
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KEY PRINTING SUPPLIES

Printers relied heavily on their printing presses and equipment for capability, efficiency, and quality. Printers were normally extremely careful in the selection of their equipment. Different brands of equipment tended to vary in their operating procedures and methods, so printers tried not to switch brands to avoid the need to retrain workers and stocking yet another set of spare parts. There were only a handful of reputed printing presses and equipment-makers in the world and all those operated in Singapore were represented either by distributing agents or by direct subsidiaries.

The main variable cost in printing was that of paper, with paper procurement management important for cost control. Printers usually would not place orders to paper suppliers or paper traders without first making price comparisons. Both the larger suppliers and smaller traders obtained their stock from overseas paper mills based on their own forecasts as to the type and quantity that would be needed by the industry. The five to six larger paper suppliers had the advantage over smaller traders in that they had economy of scale and could stock more varieties of paper. The kind of paper a printer needed depended on the specifications of each customer’s print product. For regular print jobs or for paper commonly used by many print products, printers could choose to order directly from paper mills overseas. For irregular, specific paper needs, printers would have to buy paper from whomever had such paper in stock.

TECHNOLOGY

The pre-press stage was once a labor-intensive operation requiring specialized skills, but advancements in computer-to-press technology had now reduced the whole pre-press operation to just data manipulation using specialized software on computers. This meant that the value and role of pre-press companies in the production chain of printing had become significantly reduced. Desktop-publishing software and skills had become so common that many graphic art companies and big companies like Creative Technology Ltd had set up their own in-house facilities to do layout, typesetting, and even color separation procedures for themselves.

Advances in information technology (IT) were also creating a concern as to whether electronic communication might one day replace print communication altogether. Research conducted by ManRoland, the world’s second-largest maker of printing presses, had concluded that such advances in IT might affect the “print manual, greeting card, and form segment”. However, the report did also estimate that this segment represented only some 6 percent of the total volume of the printing market. According to a study by Xerox, the company that popularized photocopying, the percentage of printed documents would decline substantially from the present 90 percent to 40 percent in 2005 worldwide. The study, however, also reported that in terms of absolute volume, paper documents would actually increase four-fold in the same period.

Advancements in digital technology had also affected the industry. Xerography printing had progressed tremendously in recent years. Even full-color printing could now be done at a speed and quality almost comparable to that of a conventional printing press, with the added advantages of on-demand and variable data-filling capabilities. A new type of printer had emerged to exploit such technology and had actually created a new segment in the market. For example, Singapore Post had set up a company called DataPost to print monthly statements for large organizations. DataPost had so far been a great success.

2 Quoted in HBM Print Ltd: Internal Business Plan, 2000, pp. 2.
VOCA TIONAL TRAINING PROVIDERS FOR THE PRINTING INDUSTRY

Singapore's Institute of Technical Education (ITE) had been the only formal training source for the industry in the country. The ITE was established as a post-secondary institution on 1 April 1992, under the charge of the Ministry of Education, Singapore. By providing technical education and training, it sought "to create opportunities for school leavers and adult learners to acquire skills, knowledge and values for lifelong learning". Until January 2000, the ITE had run printing courses in both theoretical and skills training. But due to a changed emphasis in government economic policies, the ITE had now decided to concentrate only on theoretical instruction for all printing courses, letting the industry take care of the practical side of training through on-the-job apprenticeship schemes. The Printing Trade Advisory Committee that had been advising the ITE in the training needs of the printing industry had also been dissolved. The industry was now left on its own to take care of its future training needs.

Besides the ITE, the printing industry received training support from two industrial organizations: the IOP itself, and the Printing & Media Association of Singapore (PMAS). The PMAS dated back to the 1930s, and with 140 corporate members, it was resource-rich and generally regarded by outside agencies as the representative of the printing industry. It had worked with government bodies on matters concerning the industry on many occasions. However, the PMAS was not popular with smaller companies in the industry because they felt its leadership was dominated by a few large companies and its membership had too high a concentration of suppliers. Courses conducted by PMAS focused mainly on helping the industry in its business management.

THE IOP’S ACTIVITIES

The IOP operated its business from premises some 800 square feet in size, consisting of several small rooms. The premises were provided free-of-charge by Cyber (Pte) Limited, a major sales agent of printing machinery, at the rear of Cyber Building. The rooms were furnished minimally and used only as a venue for meetings and training. Other than several social activities, the IOP had only organized some training for its members. Training courses were mainly one-off short lectures and talks conducted on an ad hoc basis. There was no structured training plan for continuity. Lectures and talks conducted focused mainly on the latest technological news and specific theoretical knowledge generally thought useful in helping members to advance in their work. These lectures and talks were organized mostly as a free service to members. The IOP drew trainers from its members and from equipment suppliers within the industry. Such suppliers were familiar with the latest technical information on their goods and were more than willing to serve as trainers because of the chance to promote their product image. Members with good theoretical knowledge in specific areas were also invited to give talks in a personal capacity. Such members tended to be more reluctant to take part, given the small personal benefit to themselves. They often needed persuading. Lectures and talks as such were organized only when suitable trainers were found. The IOP had little control over whatever training content might be forthcoming.

Not all members appreciated the training service provided by the IOP. In fact, some members actually stayed away from the talks. The general feedback was that such talks were just sales promotions exercises, while others found IOP meetings at Cyber Building, a supplier’s premises, uncomfortable because of business rivalry among members.

The IOP had been looking into improving its training activities. Challenges identified up to that point...

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included training content design, instructor resources, and physical facilities.

THE IOP'S IMAGE

The IOP was well regarded by its members and enjoyed good support. But other than that, it did not have much status and its existence was hardly known by outsiders to the industry. One good example of this can be found in the case of the Singapore-Vatican Third-World Country Training Program, administered by Singapore's Ministry of Foreign Affairs. Under that program, Cambodia had been sending instructors from its Don Bosco Technical School to be trained in Singapore yearly since 1998. The ITE had always been the institute entrusted to provide the relevant training. In 2000, an offset-printing instructor was included amongst the trainees for the first time. It was then found that the ITE could not provide any training for him because it had stopped offering practical training courses in printing. The PMAS and some bigger printers were approached to take on the responsibility for training the Cambodian instructor, but no one remembered the IOP at that point. The IOP was only considered after it was quite clear that no one else would take on the job. The IOP took on the task and did the job well by getting its members to share responsibilities in specific areas. The IOP was extremely proud of how it had handled this and saw the experience as a major achievement.

THE PRESIDENT'S VISION

Major (NS) Wong had been the Honorary Secretary for the out-going Executive Committee. He understood the challenges faced by the IOP very well and had a fair idea as to how they could be overcome. All he thought he needed to do was to translate his vision into a clear strategic direction for the new Executive Committee. He began to plan his strategy.
EXHIBIT 1

OBJECTIVES OF THE IOP
(As stated in The Constitution of The Institute Of Printing)

a) Promoting and disseminating knowledge.
b) Promoting appropriate standards leading to recognized professional competence and increased status.
c) Providing information on educational and technical enquiries.
d) Promoting, organizing and operating co-operative enterprises or commercial undertakings on a co-operative basis or otherwise, provided that such enterprises or undertakings are effected in accordance with the relevant provisions of the laws of Singapore and/or those of the countries of the members in the Asia/ Pacific Region.
e) Providing information on statutory and other requirements.
f) Providing priority of participation in any program of activities of the Institute.
g) Providing and organizing cultural, educational, recreational, social, benevolent and other activities for the benefit and welfare of members and their dependents and to establish as such, trust funds and other schemes as the Executive Committee deems necessary and expedient for this purpose.
h) Establishing strong links with other organizations and with colleges both local and abroad.
i) Establishing and carrying on in Singapore and/or in the Asia-Pacific Region, training and education centers at or by means of which members of the Institute and students may obtain education, instruction and training particularly in or with regard to the printing industry.
j) Establishing or assisting in the establishment of technical and statistical libraries and to provide therefore copies of parliamentary and departmental reports, official and other papers having reference to the printing industry in Singapore and other countries in the Asia-Pacific Region, and to collect, classify, tabulate and publish all information which might be circulated to interested members.
k) Engaging in or undertaking or participating in any agreement, venture, contracts, projects and such other activities that may be for the benefit of the Institute and/ or its members.
l) Helping members to enhance their career prospects.
m) Developing a common sense of purpose and participation among members.
n) Doing all such other lawful things as may appear to be incidental or conducive to the interest of the Institute.
o) Serving the community at large.
p) Doing all that is necessary, incidental or conducive to the attainment of any of the aforesaid objects as the Executive Committee or the General Meeting may from time to time decide upon.
EXHIBIT 2

THE PRINTING PROCESS: THREE KEY STAGES

The modern printing process involves three broad stages: pre-press; press; and post-press.

Pre-press describes the preparation needed before the act of printing itself. This stage includes many steps such as color separation, type-setting, layout, and image-setting.

Press is the actual act of printing, using a printing press.

Post-press refers to any work needed after printing is done. Depending on the product, post-press activities could include cutting, folding, collating, foil-stamping, or binding.
EXHIBIT 3

PRINTING PRODUCT SEGMENTS

- Newspapers
- Magazines
- Operating and instruction manuals
- Packaging materials
- Security documents, tickets, forms
- Corporate documents
- Brochures and flyers
- Stationery
- Greeting cards/invitation cards
- Display posters and others

EXHIBIT 4

IOP MEMBERSHIP CATEGORIES AND ANNUAL SUBSCRIPTIONS

INDIVIDUAL

- Fellow $100
- Ordinary Member $50
- Associate Member $30
- Retired Member $15
- Student Member $15

CORPORATE

(Workforce)

- < 50 $200
- 50 to 100 $300
- > 100 $500
EXHIBIT 5

COMPOSITION OF THE EXECUTIVE COMMITTEE

- A President
- 2 Vice Presidents
- An Honorary Secretary
- An Assistant Honorary Secretary
- An Honorary Treasurer
- An Assistant Honorary Treasurer
- 3 Committee Members