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SECTORAL ANALYSIS - SINGAPORE CONSULTANCY INDUSTRY

February 1990

SRI International
Southeast Asia & South Pacific
Regional Headquarters

Project #7895



333 Ravenswood Ave. • Menlo Park, California 94025
(415) 326-6200 • Cable: SRI INTL MPK
Telex: 344-486 • Fax: (415) 326-5512

65 Chulia Street • #28-04, OCBC Centre,
Singapore 0104 • Tel: 5343331
Telex: RS 55272 SRISEA • Fax: 5326447



SECTORAL ANALYSIS - SINGAPORE CONSULTANCY INDUSTRY

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Regional Headquarters

The Canadian High Commission in Singapore, Commercial Section, commissioned SRI International to prepare this sectoral analysis overview. This report is designed to help Canadian organizations meet their initial information needs regarding participation in this sector in Singapore. The information presented is believed to be accurate and from sources SRI believes to be reliable. Readers are urged to verify pertinent information before committing resources.

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BACKGROUND

DIRECTIONAL EMPHASIS OF SECTOR

In order to achieve its economic growth targets, the Singapore government has realized its need to improve the overall productivity of Singapore's businesses. It is therefore actively promoting the consulting sector with particular emphasis on enhancing the efficiency of small and medium enterprises (SMEs) in Singapore.

The National Productivity Board (NPB) was established in 1972 to improve productivity through strategic training programs and management guidance and assistance. The Management Guidance Center of the NPB has a team of internal and external consultants whose expertise include industrial engineering techniques, systems designs and implementation in production/inventory planning and control, preventive maintenance, quality control (QC) systems and others. Another NPB program, the PROMIS scheme or the Productivity Managers in SMEs scheme is an extension of consultancy projects undertaken by NPB. Under this scheme, NPB senior officers or external consultants are attached to SME's as productivity managers on a part-time basis to carry out company-wide improvement programs.

Coupled with SME-development, the government is also promoting service sector exports. Targeted areas of needed expertise for export development include :

- Infrastructure development in areas where Singapore has gained a reputation (eg : public housing).
- Computerization, automation and productivity improvements in the commerce and manufacturing sector due to local economic conditions (eg : shrinking labor force and population growth).
- Introduction of advanced technology in EDP in the financial services sector.
- Market research feasibility studies and general consultancy work for international agencies like the Asian Development Bank.

Through the Economic Development Board (EDB), the government encourages foreign and local private sector participation. Today, a large number of prominent foreign accounting firms have established offices in Singapore catering to both local and foreign clients. Foreign management consultants which operate in Singapore include reputable names such as Arthur D Little, Booz Allen and Hamilton and SRI International. Foreign engineering sector consultants include Camp, Dresser and McKee and Bylander Meinhardt Partnership (local company which retains links with its overseas offices in UK and Australia).

ECONOMIC OVERVIEW

This report addresses two key practice areas within the consultancy market in Singapore : management consultancy and engineering consultancy. Management consultants offer a range of services in the areas of business strategy, production/industrial management, computerization, financial/management accounting and others. Engineering consultants provide services in the design and supervision of construction as well as in other specialized areas (eg : environment, recreation, landscaping and others).

Rapid growth of the industry can be seen through the increased presence of the major international consulting firms.

BACKGROUND ...

ECONOMIC OVERVIEW ...

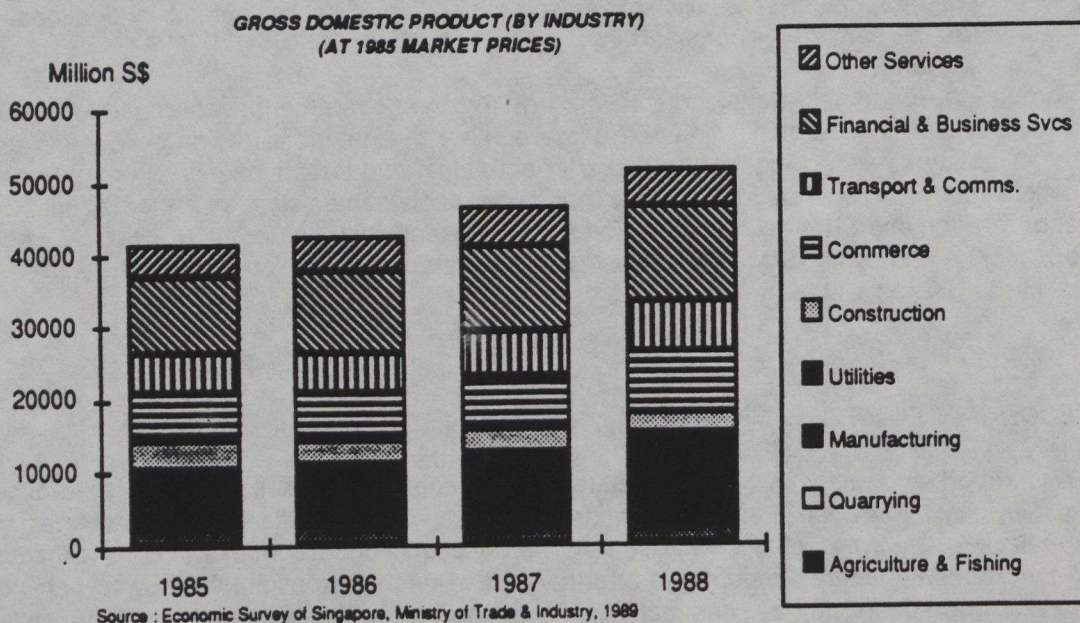
Major companies offering general management consultancy services like Booz Allen and Hamilton, Arthur D Little and SRI (which started with just 4 consultants 5 years ago) have now increased their staff pool to the 20-50 range in Singapore. They have also established and expanded a network of offices throughout the region.

Likewise, consulting arms of the big accounting firms have increased their number of consultants to between 30-60 professionals (they started with an average of 5 consultants in 1984).

This growth is attributed to rising demand for consultancy services by the construction, transportation, financial, petrochemical, electronics sectors and the government ministries in Singapore as well as the rest of the region. As these industries have reached a certain level of maturity and they have developed a more global outlook for business. This, in turn, has led them to demand external sources of expertise.

Sectoral Performance

The Singapore economy grew by 8.7% in the last quarter of 1989. This was due in part to slower growth in the transport and communications sectors. During the same period, the other key sectors, namely manufacturing, financial and business services, and commerce expanded by 9.7%, 14.0% and 9.1% respectively.* Overall, Singapore's economic growth averaged 9.1% for the first nine months of 1989.



* All growth rates are CAGRs (Compounded Annual Growth Rates)

BACKGROUND ...

ECONOMIC OVERVIEW ...

Sectoral Performance

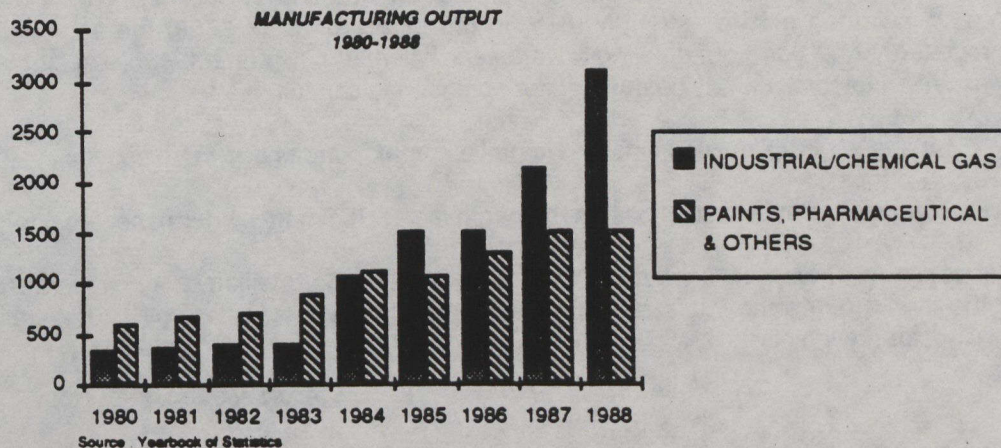
Most major industries expanded through 1989. The exception was the petroleum industry which shrank by 2% compared to 1988. (This, however, was raised on Singapore refining companies shipping down for maintenance and upgrading at the end of 1989).

Chemical Sector

The paints, pharmaceutical and chemical products industry was the leading growth industry in the manufacturing sector. It expanded by 21% during the third quarter of 1989. During the same period in 1988 some major pharmaceutical companies shutdown for expansion and upgrading. The result of this has been reflected in higher 1989 production levels.

Demand for industrial gases and acids, resins and speciality chemicals in 1989 was also strong. New establishments in the electronics industry in Singapore and the region have led to an increase in demand for speciality chemicals. The market for chemical additives and lubricants remains buoyant with steady demand from the region and the US.

With the growing interest by chemical manufacturers to relocate production to the ASEAN countries, demand for industrial consultancy services will rise.



Machinery Equipment Sector

Output for machinery equipment increased by 18% in 1989. This however, was lower than the average output growth of 28% in 1988. Oil-rig construction slowed down by the end of 1989 as some major projects were completed. However, the market for machine tool and plastic injection machinery remained strong.

Transport Sector

The transport equipment industry grew by 15% during the third quarter of 1989. The lower growth rate (compared to 28% in 1988) was because of slower aircraft overhauling activities and lower production of aviation spare parts.

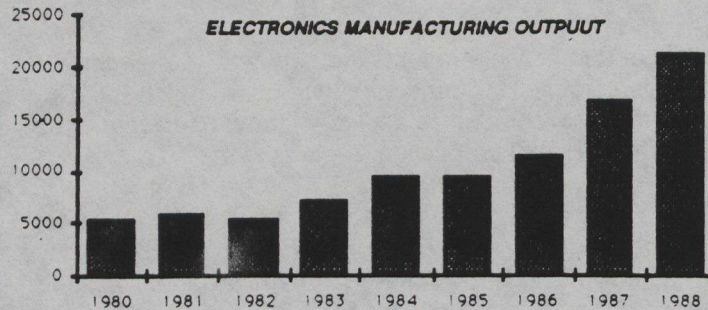
Furthermore, with the increased globalization of this sector, demand for consultancy services will rise. Singapore Airlines (SIA) recently announced its tie-up with Swissair, and together with America's Delta Airlines, the tripartite alliance is expected to lead to the world's first truly global airline system. When fully operational, the tripartite network will span all continents, with 237 destinations in 64 countries (SIA now serves 57 destinations in 37 countries). Demand for shipbuilding and ship repairing, however, continued to remain strong.

BACKGROUND ...

ECONOMIC OVERVIEW ...

Electronics Sector

Demand for consumer electrical products/components grew by 16% in 1989. Compressors, motors and other electrical appliances enjoyed strong demand in the US. With the gradual recovery of the construction sector, the electrical power equipment and systems industry has also been growing. However, companies manufacturing precision components experienced a slowdown partly because of the decrease in orders from China for consumer electronics. Companies shipping computer and office automation equipment reported a steady increase in demand in 1984.



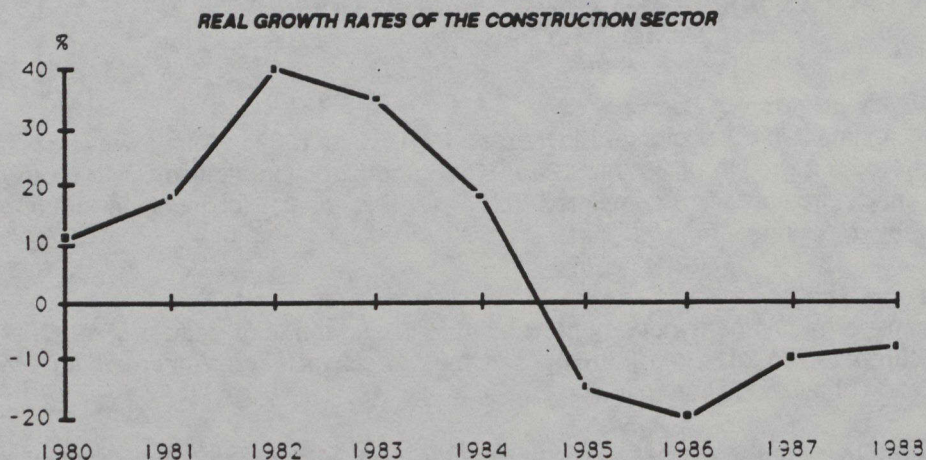
Source : Yearbook of Statistics

Construction Sector

The construction sector, the major end-user of engineering consultants, experienced some growth (3.5% in the third quarter of 1989) after four and a half years of decline. With the total value of contracts awarded growing strongly (63% in the third quarter of 1989) the sector is expected to improve further. Aside from growing private sector demand, two recent public sector developments are expected to continue raising demand for engineering consultants :

- plans to refurbish HDB flats and improve common areas and open spaces in HDB estates
- the relaxation of restrictions on the purchase of HDB flats by permanent residents

Total construction contracts awarded for 1989 reached S\$4.8 billion, a 42% increase from 1988. For the third quarter, the value of contracts for the private sector grew by 120%, while that of the public sector grew by just 17%.



Source : Department of Statistics

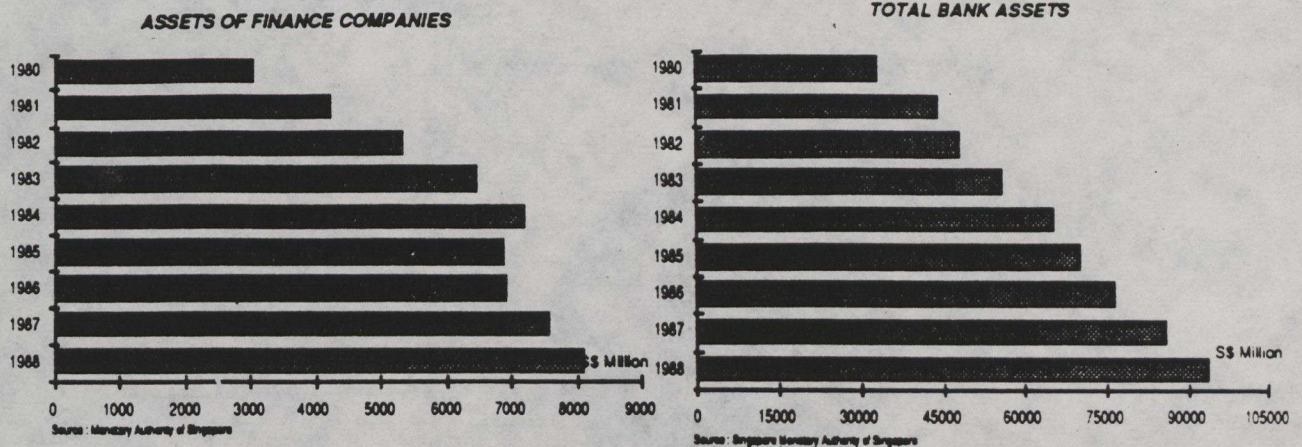
Other major end-users, (eg : the financial, transportation, petrochemical, electronic and government sectors) have likewise experienced growth in the past years.

BACKGROUND ...

ECONOMIC OVERVIEW ...

Financial and Business Sectors

Growth of financial and business services was 14% in 1989. Growth was broad-based, reflecting continued expansion in share market transactions, as well as domestic and offshore lending. Between 1980-1988, total assets of finance companies grew by 13% from S\$3.1 billion to S\$8.2 billion. Total bank assets grew by 14% from S\$33.3 billion to S\$94.1 billion.

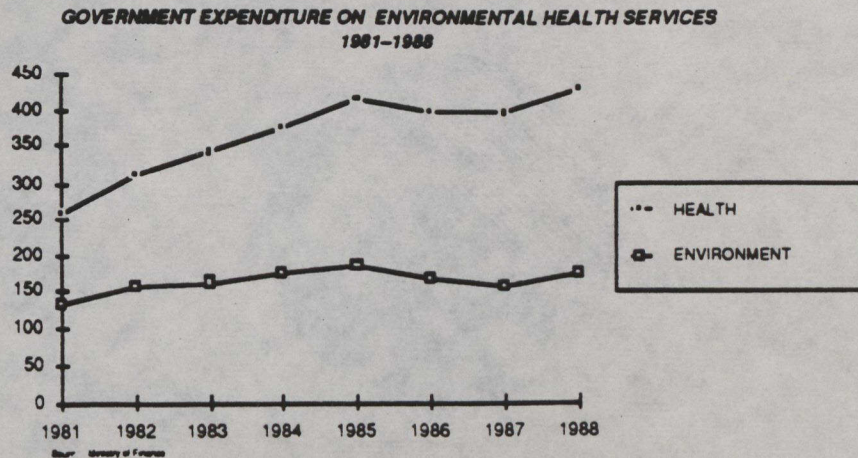


With growing demand for upgraded EDP network linkages consulting services will continue to be demanded by this sector.

The business services sector rose by 7% in 1989. The real estate industry also grew, reflecting higher occupancy of office and shopping space and a buoyant property market. Business services like legal services, accounting and data-processing services and engineering services also grew steadily.

Government Sectors

Finally, the growth in government expenditure on environmental, healthcare and other related services and the privatization of hospitals offers potential for consultants involved in these sectors.

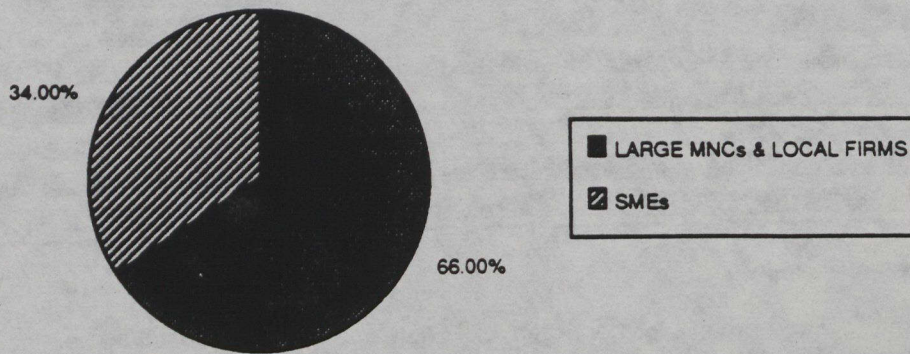


BACKGROUND ...

CURRENT SITUATION

The approximate market size of management consultancy services was S\$106 million as of 1987, more than twice its size in 1985. Large multinational (US and UK) and local firms provide the bulk (66%) of overall consultancy revenue. In Singapore, management consultancy services are also provided by US and UK multinational accounting firms. SMEs account for the balance (34%). The share amount attributable to SMEs has been increasing since 1985 when it was only 23%. This increase is a result of SMEs wanting to further develop their competitive stance in global markets.

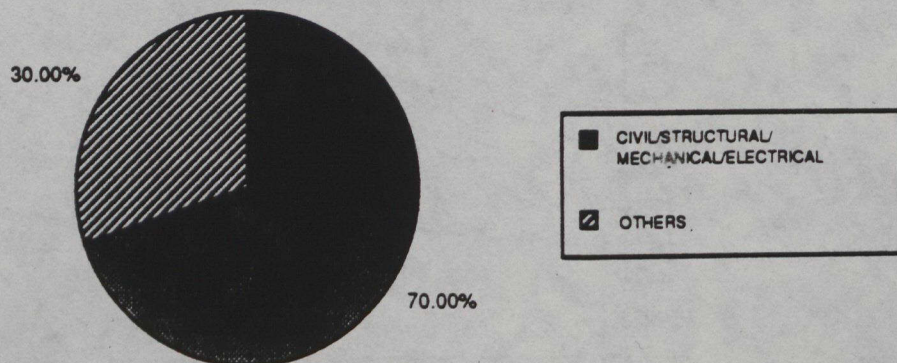
**MAJOR END-USERS OF MANAGEMENT CONSULTANCY SERVICES
1987**



Source: Survey on Management Consultants - 1988

As of 1989, the market size for engineering consultancy services was estimated at S\$140 million. Total civil/structural and mechanical services, accounted for 70% of demand (estimated at 2% of the total construction cost of S\$4.8 billion). Other services, including environmental, recreation, and other specialized engineering services, accounted for the balance 30% (the total market for environmental services including the sale of equipment was estimated at S\$50m).

**MARKET FOR ENGINEERING CONSULTANCY SERVICES
1989**



Source: Trade Interviews

BACKGROUND ...

CURRENT SITUATION ...

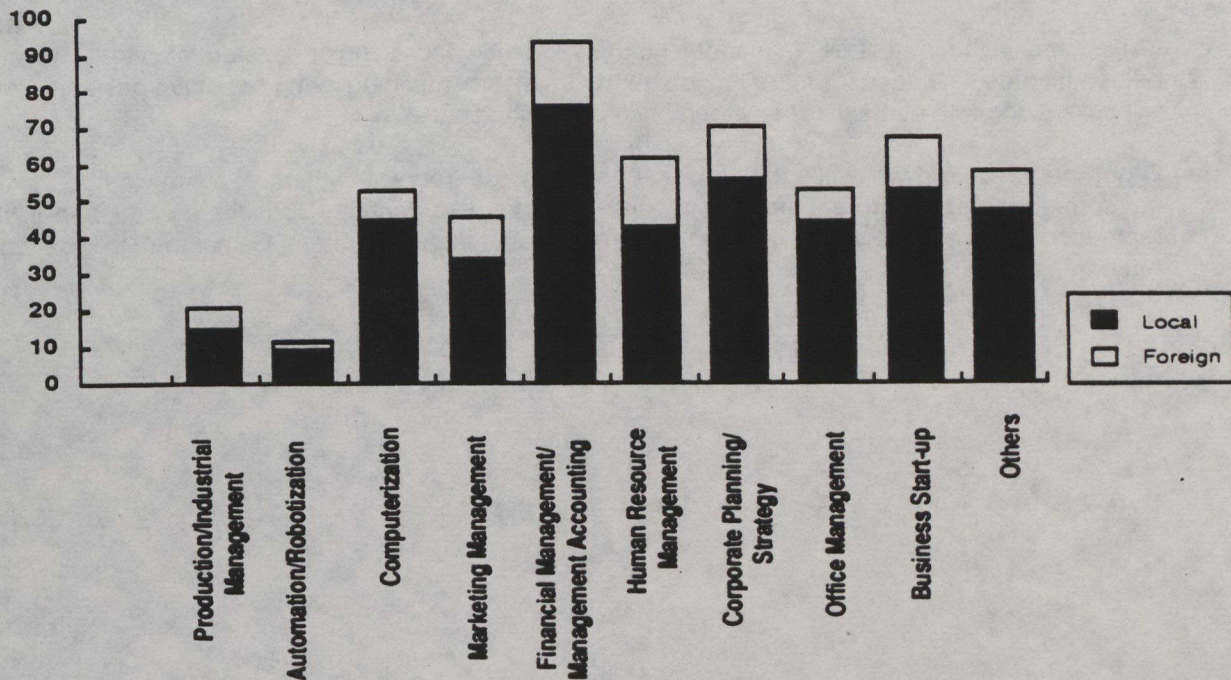
Demand for Management Consultants

The range of services offered by management consultants include :

- Production/industrial management
- Automation/robotization
- Computerization
- Marketing management
- Financial management/management accounting
- Human resources management
- Corporate planning strategy
- Office management
- Business start-up
- Others

As of 1989, the most popular of the services offered by consultancy firms was financial/management accounting (93 firms offered this service). Corporate planning and strategy consulting was also offered to firms.

NUMBER OF MANAGEMENT CONSULTANCY FIRMS PER TYPE OF SERVICE (1989)



Source: Directory of Management Consultants

BACKGROUND ...

CURRENT SITUATION ...

Demand for Consulting Engineers and Other Services

The range of services offered by engineering consultants include :

- Civil/structural
- Mechanical/electrical
- Environmental/industrial
- Others

Most firms (approximately 100) provide civil/structural and mechanical/electrical consulting services. Despite the fact that construction is beginning to pick up, the market for civil/structural services is already well-developed in terms of infrastructure requirements. Furthermore, this sector is dominated by local contractors. Potential entry areas for foreign companies are in specialized services such as buildings with special intelligence and other high-technology services not available in the local market.

In the case of environmental engineering, however, there are few local consultants. As more industries establish operations in Singapore, given the country's limited geographic size, demand for consultants in this area will increase. In particular, there will be a growing demand for consultants in the area of recycling (e.g. disposal of solid waste, pollution control, waste water treatment, etc.)

Consultants in the area of risk management, transportation/packaging of hazardous material will also be demanded. The need for more equipment for environmental monitoring (eg : blue gas analyzers) will grow along with demand for environmental protection studies.

Other areas of growth will include consultants in the recreation and tourism sector as the government continues to develop Singapore into a tourism center. Consultancy required in the recreation sector will, however, demand conceptualized models (eg : West Edmonton Mall, Canada) rather than actual construction.

BACKGROUND ...

FUTURE TRENDS

The demand for consultancy services will continue to grow over the next 5 years. The growth areas for management and engineering consultancy services are as follows :

- accounting/financial services
- human resource development/training
- computerization/IT (including automation and robotics)
- environmental consultancy
- recreation/tourism

There is a potential for growth of government projects because of the thrust towards making each government department responsible for its own budget. The government's thrust towards skills and training, and its emphasis on productivity improvement will continue to drive demand for consultancy services in specialized areas.

General growth areas which will demand future consulting services will include :

- The construction sector where demand for engineering consultancy services will increase. (However, demand levels are unlikely to reach 1980 peak levels as Singapore's infrastructure is already well developed.)
- The specialized high technology service sector including environmental engineering, social engineering (eg : tourism) as well as recreational services.
- The healthcare sector where with the privatization of the Singapore General Hospital (SGH) and eventually other government hospitals, both management and engineering consultants will be required in various areas (eg : marketing and positioning, staffing, training, cost control, construction). Furthermore, consultants specializing in healthcare (eg : Hospital Consultants of America), will be required to coordinate and supervise restructuring. The private healthcare sector will likewise be demanding consultancy services in order for it to remain competitive.

The use of consultants by SMEs will grow as SMEs move away from the traditional family-style management. Demand for feasibility studies in manufacturing will grow. Other factors that will contribute to the increase in the use of consultants are the granting of government subsidies and programs geared towards helping consultancy firms entice SMEs to engage their services. These programs include several projects such as the consultancy award which aims to highlight the benefits of consultancy services to SMEs. Other projects include the granting of special incentives to consultancy firms that specialize in helping SMEs, and the provision of training of local consultants on the marketing of their services to SMEs.

Overall, however, Singapore's market size is insufficient to sustain the operation of the large international consultancy firms. Thus, the consultancy business is seen as a regional business with Singapore as a base. The growing economies of the ASEAN countries - Malaysia, Indonesia, Thailand and the Philippines - represent a large market potential for consultancy services. It is projected that growth in consultancy work will outstrip economic growth in the region.

COMPETITOR ANALYSIS

KEY PARTICIPANTS IN THE CONSULTANCY SECTOR

There are approximately 150 management consultancy firms operating in Singapore employing 1,000 consultants. International consultants account for about 20-30% of the total. Similarly, there are more than 100 engineering consultancy firms and about 1,000 engineers. The majority here, however, are local firms.

The consulting arms of the major accounting firms dominate the market for financial/management accounting services.

The major firms offering human resource development and training are Roger Gill, Mercury Goldman, Hay Management Consultants and William & Mercer Fraser. The top general management consultants offering services in strategic planning, production/industrial and office management are Arthur D Little, Booz, Allen and Hamilton and SRI International. Other smaller management include Business International (the consulting arm of the London - based Economist Group) and Pacific Rim Consultants.

Frank Small and Associates and Survey Research Singapore are the major consultants for marketing management. Martin Van and Associates and Alexander Proudfoot are two firms offering consultancy in the industrial/manufacturing category.

Major consulting engineering firms offering services in structural/civil construction include local firms like Ranking Squire and Partners and KTP Ho and Partners and OVE Arup. Ewbank Peerce Engineers, J Rogers and United Projects Consultants are some of the larger mechanical/electrical consulting firms.

There are about 20 local firms and 12-15 foreign firms engaged in environmental consulting. These include the Singapore Institute of Standards and Industrial Research (SISIR), Chemitreat, Millipore and Camp, Dresser & Mackie. The majority of foreign environmental consulting firms are US-based. Canadian consulting firms tend to operate on a contract basis in Singapore. Contracts involving Canadian companies have included sectors such as oil and gas (eg. Dragon Pacific Consultants), the port (eg. Canadian Hydrographics), and Commercial Real Estate.

KEY CUSTOMERS IN SECTOR

The key customers for management consultants are large foreign and local multinational firms, SMEs and the government. The key customers for engineering consultants include the government, condominium and real estate developers, and firms in the electronic, petrochemical and food sectors.

INDUSTRY INCENTIVES AND REGULATIONS

GOVERNMENT REGULATIONS

A concessionary tax rate of 10% is applied to income earned from exports of services out of Singapore.

The general incentives such as the operational headquarters and investment allowance credits for productive assets and services development assistance are also applicable to investments in this sector.

LOCAL PREFERENCE POLICY

Singapore allows 100% foreign ownership of companies in Singapore.

ENVIRONMENTAL CONTROL POLICIES

Singapore has strict environmental controls including an :

- Environmental Public Health Act, 1987
- Water Pollution Control and Drainage and Clean Air Acts, 1987
- Code of Practice for Noise Control on Construction Sites - still in discussion process but this regulation will take effect as of early 1990

There are a number of regulations governing the construction industry regarding all aspects of building and materials. The main regulations are included in the Building Control Act of 1973, the Building and Common Property (Maintenance and Management) Act Cap 30, and the HUDC Housing Estate Act Cap 131.

**SECTORAL ANALYSIS - SINGAPORE
CONSULTANCY INDUSTRY**

**APPENDICES
February 1990**

**SRI International
Southeast Asia & South Pacific
Regional Headquarters**

Project #7895

KEY INDUSTRY AND GOVERNMENT CONTACTS**GOVERNMENT AGENCIES IN SINGAPORE****Economic Development Board**

250 North Bridge Road
 #24-00 Raffles City Tower
 Singapore 0617
 Telephone : (65) 336 2288
 Telex : RS 26233
 Facsimile : (65) 339 6077

Trade Development Board

1 Maritime Square, #10-40 (Lobby D)
 World Trade Center
 Telok Blangah Road
 Singapore 0409
 Telephone : (65) 271 9388
 Telex : RS 28617 / 28170 TRADEV
 Facsimile : (65) 274 0770 / 278 2518

Ministry of Environment

40 Scotts Road
 Environment Building
 Telephone : (65) 732 7333

National Productivity Board

2 Bukit Merah Central, NPB Building
 Singapore 0315
 Telephone : (65) 278 6666

Singapore Institute of Standards & Industrial Research

1 Science Park
 Singapore 0511
 Telephone : (65) 7729568
 Facsimile : (65) 7780086

GENERAL BUSINESS ASSOCIATIONS**Canada - Singapore Business Association
Asia-Pacific Foundation**

2529 Kings Avenue
 West Vancouver, BC
 Canada, V7V 2C7
 Telephone : (1-604) 684 5986

Singapore Manufacturers' Association

20 Orchard Road
 SMA House
 Singapore 0923
 Telephone : (65) 338 8787

Canadian Business Association

c/o Private Secretarial Services
 20 Bideford Road
 #11-05 Wellington Building
 Singapore 0922
 Telephone : (65) 734 2608

GOVERNMENT AGENCIES IN CANADA**Singapore Trade Development Board**

c/o United Overseas Bank (Canada)
 The Standard Life Center, 10th Floor
 121 King Street West
 Toronto, Ontario
 Canada M5H 3T9
 Telephone : (1-416) 363 8227
 Telex : 06-218004 OUBSC TOR
 Facsimile : (1-416) 363 1671

Industry of Science and Technology, Canada

235 Queen Street
 Ottawa, Ontario
 Canada, K1A 0H5
 Telephone : (1-613) 995 5771
 Telex : 053-4123
 Facsimile : (1-613) 952 9620

Department of External Affairs

125 Sussex Drive
 Ottawa, Ontario
 Canada, K1A 0G2
 Telephone : (1-613) 996 9134
 Telex : 053-3745
 Facsimile : (1-613) 952 3904

PRIVATE ASSOCIATIONS**Association of Consulting Engineers**

1 Maritime Square, #09-11
 World Trade Centre
 Singapore 0409
 Telephone : (65) 272 9100
 Facsimile : (65) 270 6391

Association of Management Consultants

151 Chin Swee Road, #03-01
 Singapore 0106
 Telephone : (65) 732 5725

Association of Small and Medium Enterprises

303 Tanglin Road
 Singapore 1024
 Telephone : (65) 475 2566
 Facsimile : (65) 472 1941

OTHER TAX INCENTIVES ADMINISTERED BY ECONOMIC DEVELOPMENT BOARD

OTHER TAX INCENTIVES ADMINISTERED BY ECONOMIC DEVELOPMENT BOARD			
Tax Incentives	Qualifying Activities	Minimum Requirements	Tax Concession
• Pioneer Status			This incentive provides for complete exemption of corporate income tax. A company granted pioneer status is exempted from the 33% corporate income tax for a period of 5-10 years from the day it begins commercial production.
• Investment Allowance	Manufacturing and specialized technical servicing projects as an alternative to pioneer status.		Under the scheme, a company is granted tax exemption on a specified amount of profits equal to the approved investment allowance which is a percentage (up to a maximum of 50%) of the fixed investment in plant, machinery and equipment actually incurred by the company on the project. The amount of investment allowance to be approved will depend on the merits of the project.
• Capital Assistance			Under this scheme, industrial investors with desirable projects can obtain long term loans at concessionary interest rate.
• Operational Headquarters (OHQ)	Approved headquarters operations.	Operational Headquarters 1. should hold equity investments in companies outside of Singapore, and 2. must provide approved headquarters services to these companies from Singapore	1. Income arising from the provision in Singapore of approved services will be taxed at 10%. 2. Other income from overseas subsidiaries and associated companies may also be eligible for effective tax relief. 3. Incentive will be up to 10 years with provision for extension.
• Post-Pioneer Incentive	Approved companies enjoying pioneer status, or export incentive where the export incentive is a follow-up to the pioneer status previously awarded.	Companies must be enjoying pioneer status or export incentive on or after 1 April 1986 and should incur additional investment.	Corporate tax rate of 15% upwards for up to 5 years upon expiry of pioneer or export incentive.
• Venture Capital Incentive	Investment by eligible companies and individuals in approved new technology projects.	Companies must be 1. at least 50% owned by Singapore citizens or Singapore permanent residents, and 2. incorporated and resident in Singapore for tax purposes. Individuals must be Singapore citizens or permanent residents.	Losses incurred from the sale of shares, up to 100% of equity invested can be set off against the investors' other taxable income.

LIST OF MAJOR ENVIRONMENTAL CONSULTANTS***Singapore Institute of Standards Research***

1 Science Park Drive

Singapore 0511

Telephone : (65) 7787777

Facsimile : (65) 7780086

Handy and Harmau Manufacturing Pte Ltd

20 Tuas Avenue 5

Singapore 2263

Telephone : (65) 8611766

Camp Dresser & McKee Incorporated

1 Maritime Square, #13-05

World Trade Centre

Singapore 0409

Telephone : (65) 2733311

Chem-Solo Technologies Pte Ltd

31 Pioneer Sector 2

Singapore 2263

Telephone : (65) 8614277

Facsimile : (65) 8618151

Chemitreat Pte Ltd

28 Tuas Avenue 8

Singapore 2263

Telephone : (65) 8613603

Facsimile : (65) 8613803

Millipore Corporation

101 Thomson Road, #26-03

United Square

Singapore 1130

Telephone : (65) 2532733

Facsimile : (65) 2544056

LIST OF MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS

Balkoff & Associates

15 Hoe Chiang Road, #04-03
Sanford Building
Singapore 0208
Telephone : (65) 2213838

Chan Chee Wah Consultants

170 Upper Bukit Timah Road, #15-04
Bukit Timah Shopping Centre
Singapore 2158
Telephone : (65) 4694188

Eugene H L Chan & Associates

52 Horne Road, #03-03
Singapore 0820
Telephone : (65) 2951966

Y F Chan Consulting Engineers

37 Hill Street
Singapore 0617
Telephone : (65) 3374564/3380564

CMP Consultants Pte Ltd

845 Geylang Road, #04-13/14/15
Tanjong Katong Complex
Singapore 1140
Telephone : (65) 7487744

Leeng Consultants Pte Ltd

24 Peck Seah Street, #08-03
Nehsons Building
Singapore 0207
Telephone : (65) 2204310

C T Cheng & Associates

257 Selegie Road, #12-285
Selegie Complex
Singapore 0718
Telephone : (65) 3374518/9

Fichtner (Asia) Pte Ltd

51 Newton Road, #17-01/03
Goldhill Plaza
Singapore 1130
Telephone : (65) 2523355

GKM Chin Consulting Engineers

9 Neram Crescent
Singapore 2880
Telephone : (65) 4810683

T Y Lin South East Asia Pte Ltd

43B Beach Road
Singapore 0718
Telephone : (65) 3393636

T H Chuah & Associates Pte Ltd

19C Middle Road, #11-04/04A
Fortune Centre
Singapore 0718
Telephone : (65) 3382386

Chung Swee Poey & Sons/Zeng Consultants

20 Bideford Road, #05-03
Singapore 0922
Telephone : (65) 7341043

Ee Hoong Chwee & Company

Winchester House, #04-48A
16 Collyer Quay
Singapore 0104
Telephone : (65) 5325591

Watson Hawksley Engineering Consultants (S) Pte Ltd

20 Maxwell Road, #13-00
Maxwell House
Singapore 0106
Telephone : (65) 2208788

**Ewbank Preece Engineers Pte Ltd/
Preece Cardew & Rider (S E Asia)**

5001 Beach Road, #04-01
Golden Mile Complex
Singapore 0719
Telephone : (65) 2982344

Building Engineering Consultants

1 Queensway, #03-02
Queensway Shopping Centre
Singapore 0314
Telephone : (65) 4754266

Binnie & Partners (Singapore)

56B Gilstead Road
Singapore 1130
Telephone : (65) 2534622

Houkehua Consulting Engineers

112 Middle Road, #05-00
Midland House
Singapore 0718
Telephone : (65) 3375555

LIST OF MAJOR MANAGEMENT CONSULTANT FIRMS

**Alexander Proudfoot Productivity Services
Company Singapore Pte Ltd**

14 Robinson Road, #08-01 Far East Finance Building
Singapore 0104
Telephone : (65) 2254646
Facsimile : (65) 2251124

Arthur Anderson Associates

5 Shenton Way, #31-00 UIC Building
Singapore 0106
Telephone : (65) 2204377
Facsimile : (65) 2234795

Arthur D Little Far East Inc

5 Shenton Way, #32-00 UIC Building
Singapore 0106
Telephone : (65) 2258222

Arthur Young Management Consultants

36 Robinson Road, #17-00 City House
Singapore 0106
Telephone : (65) 2201135
Facsimile : (65) 2250465

**Booz, Allen & Hamilton Management Consultants
Pte Ltd**

10 Collyer Quay, #05-01 Ocean Building
Telephone : (65) 5356600

Business International

11-03A Ocean Building
10 Collyer Quay

Coopers and Lybrand Associates

9 Penang Road, #13-00 Supreme House
Singapore 0923
Telephone : (65) 3362344
Facsimile : (65) 3362539

Deloitte Haskins Sells Pte Ltd

6 Battery Road, #27-01
Standard Chartered Bank Building
Singapore 0104
Telephone : (65) 2248288
Facsimile : (65) 2247529

Ernst & Whinney Consultants

10 Collyer Quay, #21-01 Ocean Building
Singapore 0104
Telephone : (65) 5357777
Facsimile : (65) 5327662

Hay Management Consultants

15 Beach Road, #04-05 Beach Centre
Singapore 0718
Telephone : (65) 3391166

Hill and Knowton Asia Ltd

122 Middle Road, #05-09 Midlink Plaza
Singapore 0718
Telephone : (65) 3385344
Facsimile : (65) 3392738

Morganthau & Mill Associates Pte Ltd

10 Collyer Quay, #24-08 Ocean Building
Singapore 0104
Telephone : (65) 5325055

PA Consulting Services Pte Ltd

6 Battery Road, #12-03
Standard Chartered Bank Building
Singapore 0104
Telephone : (65) 2230911
Facsimile : (65) 2241239

Pacific Rim Consulting Group Pte Ltd

20 Duke's Road
Singapore 1026

Pannell Kerr Forster Management Consultants

36 Robinson Road, #07-01 City House
Singapore 0106
Telephone : (65) 2252011
Facsimile : (65) 2255173

Peat Marwick Managements Consultants

16 Raffles Quay, #22-00 Hong Leong Building
Singapore 0104
Telephone : (65) 2207411
Facsimile : (65) 2250984

Roger Gill & Associates Pte Ltd

105 Cecil Street, #03-01/02 The Octagon
Singapore 0106
Telephone : (65) 2228460
Facsimile : (65) 2251337

SRI International

65 Chulia Street, #28-04 OCBC Centre
Singapore 0104
Telephone : (65) 5343331
Facsimile : (65) 5326447

William M Mercer Fraser Pte Ltd

20 Collyer Quay, #17-01
Singapore 0104
Telephone : (65) 2228661
Facsimile : (65) 2225792

LIST OF MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS ...

Ove Arup & Partners

5001 Beach Road, #04-03
Golden Mile Complex
Singapore 0719
Telephone : (65) 2983033

P S Kan & Associates

7500-A Beach Road, #07-312
The Plaza
Singapore 0719
Telephone : (65) 2949364

C K Ko Consultants

141 Cecil Street, #04-07
Tung Ann Association Building
Singapore 0106
Telephone : (65) 2256048

Lau Downie & Partners

167B/169B Thomson Road
Singapore 1130
Telephone : (65) 2532333

Tuh Fuh Lee & Lee Bay Tseng

12 Medeiros Building
18 Cecil Street
Singapore 0104
Telephone : (65) 5326755/5322755

C Y Lee Consultants

Serangoon Garden P O Box 407
Singapore 9155
Telephone : (65) 2880258

K S Lee & Associates

138A/B Sims Avenue
Singapore 1438
Telephone : (65) 7468855

Technocon Engineers Pte Ltd

200 Jalan Sultan, #13-10
Textile Centre
Singapore 0719
Telephone : (65) 2929605

Mott MacDonald Asia Pte Ltd

15 Hoe Chiang Road, #09-04
Sanford Building
Singapore 0208
Telephone : (65) 2253988

H C Lim Consultants Pte Ltd

1 Selegie Road, #08-15
Paradiz Centre
Singapore 0718
Telephone : (65) 3366388

Steen Consultants Pte Ltd

309 Bukit Timah Road
Singapore 1025
Telephone : (65) 7324466

Moh & Associates (S) Pte Ltd

5001 Beach Road, #04-10
Golden Mile Complex
Singapore 0719
Telephone : (65) 2950611

Watson Hawksley Asia

20 Maxwell Road, #13-00
Maxwell House
Singapore 0106
Telephone : (65) 2208788

Camp Dresser & McKee Incorporated

1 Maritime Square, #13-05
World Trade Centre
Singapore 0409
Telephone : (65) 2733311

Leong Consultants Pte Ltd

24 Peck Seah Street, #08-03
Nehsons Building
Singapore 0207
Telephone : (65) 2204310

Harris & Sutherland Pte Ltd

10 Anson Road, #22-07
International Plaza
Singapore 0207
Telephone : (65) 2215647

SLP Consulting Engineers

6001 Beach Road, #18-05
Golden Mile Tower
Singapore 0719
Telephone : (65) 2923009

Phus Consultants

51 Newton Road, #17-01/03
Goldhill Plaza
Singapore 1130
Telephone : (65) 2523355



3 5036 20040565 5

LIST OF MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS ...

Sir Bruce White, Wolfe Barry & Partners

63 Robinson Road, #05-22
 Afro-Asia Building
 Singapore 0106
 Telephone : (65) 2237564

SC Engineering Consultants Pte Ltd/Seow Hong Chlow & Partners

190 Middle Road, #11-06
 Fortune Centre
 Singapore 0718
 Telephone : (65) 3372828

Sim Bee Teck & Associates

1 North Bridge Road, #20-07
 High Street Centre
 Singapore 0617
 Telephone : (65) 3363500

T C Sin & Associates

1 Sophia Road, #05-26
 Peace Centre
 Singapore 0922
 Telephone : (65) 3373847

Tan Ee Ping & Partners

190 Middle Road, #16-08
 Fortune Centre
 Singapore 0718
 Telephone : (65) 3397277

United Project Consultants Pte Ltd

432 Balestier Road, #02-444
 Public Mansion
 Singapore 1232
 Telephone : (65) 2553900

K H Chong & Associates

150 Orchard Road, #09-06
 Orchard Plaza
 Singapore 0923
 Telephone : (65) 7376158

Tay Keng Yeow & Associates

Block 86, #03-206/207
 Marine Parade
 Singapore 1544
 Telephone : (65) 3458142/3/3456678

Thia & Associates Consulting Engineers Pte Ltd

Block 13, #01-3974
 North Bridge Road
 Singapore 0719
 Telephone : (65) 2964945

K T P Ho & Partners

Block 165, #08-3689
 Bukit Merah Central
 Singapore 0315
 Telephone : (65) 2735622

Engineering Associates

291 Serangoon Road, #02-00
 Singapore 0821
 Telephone : (65) 2988611

M K Consultants

Block 2, #03-701
 Balestier Hill Shopping Centre
 Singapore 1232
 Telephone : (65) 2526676

