

Theatres of History and Memory: Industrial Heritage of 20th Century Singapore

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End of project 30/9/2018

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Hi everyone

The Theatres of History and Memory: Industrial Heritage of 20th Century Singapore project ends today after 1½ years.

After hundreds of posts on Singapore's industrial heritage, we have not only shared our research with the group, but also learnt much about people's industrial lives and memories from your posts – thank you!

As the historian Raphael Samuel said, history is made by a thousand different hands and our industrial heritage is made up of 'theatres of memories' of this rich history.

I attach my article on the aims and findings of the project which has just come out in the Asian Network of Industrial Heritage bulletin.

You can download the pdf here:

<https://www.facebook.com/ANIH.ASIA/posts/508816876284103>

We have submitted our report on Singapore's industrial heritage to the National Heritage Board which includes our findings and recommendations.

After 1959 28/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/500424357093565/>

Made in postcolonial Singapore after 1959: Sembawang Shipyard, converted from the British naval dockyard into a commercial shipyard in 1968, and managed by British ship-builders Swan Hunter.

1959, when Singapore became a self-governing state, rather than 1963 or 1965 is the year which marks the start of our postcolonial social and economic history.

Straits Times Trade & Industry July 1968.

Colonial era 25/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/499204023882265/>

Made in Singapore during the colonial era: pipes, shoe polish, canned food, and drinks.

Food for thought for our bicentennial next year.

Straits Times Annual 1955, Straits Times Trade & Industry December 1960.

Industrial estates 23/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/498233877312613/>

The 'inner ring' of industrial estates, within a 7 km-radius of the city centre, in the 1970s.

They include Toa Payoh, Kallang Basin, Tanglin Halt, and Redhill.

Unlike Jurong and other outlying estates, the inner ring industries were light industries located near HDB estates, drawing their workforce from the female residents.

One US multinational even sent its staff into a nearby kampong, using drums to attract the residents and explain the benefits of working in the factory.

Singapore Trade and Industry, March 1974.

Planning 21/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/497429880726346/>

The brains behind industry: planning, meetings, fieldwork by JTC staff.

There are some remarkable looking maps – where are they now?

Jurong Town Corporation Annual Report 1980.

Made in Singapore palm juice and refrigerators 20/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/496941234108544/>

Made in Singapore palm juice and refrigerators – Toddy and Pan Electric – a quite interesting combination on the cover of Straits Times Trade and Industry, April 1968!

Mechanics 17/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/495730100896324/>

Made in Singapore mechanics. On my way home from the airport, my taxi driver was a former ship repair mechanic who had worked for ST Marine. As always I learned much from our taxi drivers.

He only finished secondary school (Chinese-stream) before starting to work. His first job was fitting windows for HDB flats in the new towns like Bedok. It strikes me how versatile mechanics and technicians were.

He also emphasised how enthusiastic – ‘好学’ – he and his cohort were to learn the technical trades and skills, although they didn't have much formal education. They could easily learn, he told me, by observation.

He told a hilarious story of a new technician with four certificates who made a very basic error.

He recalled the good old days of technical work before the pay became too low for Singaporeans. Singapore, he thinks, is now paying the price for losing much of the people's technical experience and expertise.

TRAINEES MECHANICS AT WORK IN PORT OF SINGAPORE AUTHORITY'S TRAINING WORKSHOP. 1971:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/d85a619d-1161-11e3-83d5-0050568939ad>

Setron 12/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/493470924455575/>

Made in Singapore TV sets by Setron, 1966.

Setron, located at Tanglin Halt, was Singapore's first electronics plant, set up by local businessmen with technical assistance from MBLE International of Belgium.

It made TV sets between 19 and 25 inches.

MAIN ENTRANCE OF SETRON LIMITED FACTORY AT TANGLIN HALT INDUSTRIAL ESTATE. PHOTO TAKEN ON ITS OFFICIAL OPENING BY MINISTER FOR FINANCE, LIM KIM SAN. 28/04/1966:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/2e4f1126-1162-11e3-83d5-0050568939ad>

FIRST SINGAPORE ELECTRONICS FACTORY. The Straits Times, 28 April 1966:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19660428-1.2.98.1>

Jurong Town Pier and Restaurant 10/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/492712774531390/>

Part of a rapidly expanding Jurong Town: the pier and floating restaurant which opened in 1970.

JTC Annual Report 1972.

Jurong's new 'character'. The Straits Times, 12 April 1971, Page 10:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19710412-1.2.56>

Industries outside Jurong 8/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/491617794640888/>

Industries outside Jurong: Kallang Basin and Tanjong Rhu in the east in 1969.

JTC Annual Report 1969.

Taman Jurong 4/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/489856961483638/>

Taman Jurong, Jurong's first neighbourhood.

Other neighbourhoods, social amenities and green areas would emerge in the 1970s, making Jurong into what JTC envisaged as a 'garden industrial town'.

JTC Annual Report 1970.

Made in Singapore 1969 2/9/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/489093398226661/>

Made in Singapore in 1969: steel, coins, cars, scooters (Vespa?), books, textiles.

JTC Annual Report 1969.

Malayan Railways extension 30/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/487671968368804/>

In 1965, the 12-mile long extension of the Malayan Railways from Bukit Timah to Jurong Industrial Estate was completed by EDB.

The extension gave Jurong's wharves (later Jurong Port) and industries direct access to West Malaysia.

It was thus a child of the merger with Malaysia and of Singapore's aspirations for the common market.

Its first train shipment carried clinker (coal residue) between Jurong and Ipoh.

Image: FIRST TRAIN TO JURONG INDUSTRIAL ESTATE FROM BUKIT TIMAH RAILWAY STATION. Covering Date: 11/11/1965:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/c4d0bf2d-1161-11e3-83d5-0050568939ad>

NEW JURONG RAILWAY CARRIES ITS FIRST LOADS. The Straits Times, 16 November 1965, Page 8:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19651116-1.2.43>

Pepsi Cola 28/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/486847758451225/>

Bottled in Singapore: Pepsi Cola.

In 1968, Union Ltd, bottlers of Pepsi Cola in Singapore, moved its plant from Havelock Road to Woodlands, doubling the number of bottles produced per year.

Union said that the demand for Pepsi had more than doubled in the last 5 years due to population growth, the development of new housing estates, shops and coffee shops, and the increased purchasing power of the people.

Union began bottling Pepsi in 1951, and subsequently Mirinda Orange and Lemonade and Schweppes.

PEPSI-COLA COMPANY EMPLOYEES WALKING OUT OF FACTORY AT WOODLANDS. Covering Date: 12/01/1973

<http://www.nas.gov.sg/archivesonline/photographs/record-details/9f9e044d-1162-11e3-83d5-0050568939ad>

Singapore Trade and Industry, September 1968.

Made in Singapore Premier Milk 26/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/485901735212494/>

Made in Singapore condensed milk.

Premier Milk Singapore was formed in 1967 as a joint venture between F&N and two US food companies, Beatrice Food and General Milk.

Its up-to-date plant in Jurong produced sweetened condensed milk for local consumption and export.

The industry had knock-on effects in the establishment of subsidiary industries which produced tins, cartons and labels.

Singapore was one of the largest markets in the world for condensed milk at the time, importing \$16.9 million worth of condensed milk in 1966.

Singapore Trade and Industry, January 1968.

Dr. Goh opens newest factory. The Straits Times, 4 November 1967, Page 4.
<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19671104-1.2.19>

GMTM 24/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/484448438691157/>

Great Malaysia Textile Manufacturing was formed by Richard Lee Yih Jin, a Shanghai-born industrialist from Hong Kong, in 1964.

Two years later, GMTM moved into a four-storey factory in Tanglin Halt Industrial Estate, employing over 500 workers, mostly young girls.

Lee had visited Singapore in 1963 and picked the country for his new company ahead of Taiwan.

He emphasised the importance of maintaining a high morale among workers and addressing their concerns and needs.

Singapore Trade and Industry, December 1967.

Made in Singapore 22/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/482481222221212/>

Ford's locally assembled cars, such as the Anglia, Cortina and Corsair in the 1960s, using parts from overseas Ford plants.

The Ford assembly plant in Singapore was located in Bukit Timah (the current museum for the fall of Singapore and the Japanese occupation) and employed 350 workers in 1966.

Local assembly had several advantages: it catered to the regional and local markets, allowed greater attention to detail, reduced the risk of damage during shipping, and enabled quicker delivery, even with custom-made vehicles.

Singapore Trade and Industry, March 1966.

Made in Singapore 20/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/480429505759717/>

Made in Singapore biscuits by Thye Hong, Yeo Hiap Seng soy bean and Khong Guan flour.

Although Singapore historically imported most of its food and ingredients, there were also local manufacturers familiar to us.

Other food items made in Singapore: noodles (Woh Hup), jam canning (Star Corporation), chocolate (Sheng Hue), and sugar (Sugar Industries of Singapore).

Singapore Trade and Industry, June 1965.

Jurong Garden Industrial Town Tour 18/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/477854432683891/>

The Jurong Garden Industrial Town Tour which we propose as part of the industrial heritage-theatre of memory programming.

The itinerary:

1. Jurong Hill: hilltop view of Jurong and the Garden of Fame.
2. The coast and original heart of Jurong: heavy industry, e.g.

National Iron and Steel Mills (the flagship project of Jurong Industrial Estate),
shipyards at Gul and Benoi Roads,
Sugar Industries of Singapore,
Jurong Port.

3. Interior: light industry, e.g.

Acma,
automobiles (Associated Motors, Bridgestone),
textiles (South Grand),
Chartered Industries of Singapore.

4. Jurong Garden Industrial Town:

Taman Jurong,
drive-in cinema,
sports complex,

(sole) flatted factory,
Chinese & Japanese Gardens.

5. Jurong Town Hall: former office of Jurong Town Corporation.

What do you think? Would you go on such a tour?

Made in Singapore 14/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/474356326367035/>

Made in Singapore ice-cream.

Cold Storage Creameries, an American firm established in Singapore in 1937, produced over 20 flavours of Magnolia ice-cream, lollipops and wafer sandwiches.

It made special lines such as the Drumstick (a factory-wrapped ice-cream cone), Mister Big (a bigger version of Drumstick), Satu Kupang (10-cent ice-cream for children), and Tiger Lolly (5-cent water ice), as well as with local flavours such as durian and lychee (for Chinese New Year).

Half the manufactured ice-cream is sold within a day at Cold Storage's retail outlets and other stores, and the remaining half by Magnolia hawkers.

In 1962, a rival British creamery, UniLever, was set up to manufacture Wall's ice cream.

Singapore Trade and Industry, May 1963.

female technical student 12/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/472140229921978/>

Letter in 1972 from a female secondary student in Metalwork.

She was worried about her prospects, but interestingly had decided 'to enter the man's field' along with her friends.

The newspaper's advice was, look into the marine industry!

Future as a technician. New Nation, 28 August 1972, Page 11

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19720828-1.2.65.2>

oil rigs 10/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/470385156764152/>

The building of mobile, offshore drilling rigs by shipyards grew in the mid-1970s in response to oil exploration in Southeast Asia, and became an important part of the marine industry.

In 1980-1981, Singapore was the world's leading exporter of jack-up rigs.

Photos: EDB Annual Report 1976.

St. Joseph's Trade School 7/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/467463390389662/>

St. Joseph's Trade School, an aided school and Singapore's 2nd public trade school after the Government Trade School, was opened in 1938.

Located at 10th Mile Bukit Timah behind the historic St. Joseph's Church, it was set up by French order of the Gabrielist Brothers and partly funded by Aw Boon Haw.

The school provided training for boys from poor families to become agriculturalists, carpenters, mechanics, and printers.

Upper Bukit Timah Road (foreground) with St Joseph's Trade School and Boy's Town (centre to left), and St Joseph's Church (right). St Joseph's Trade School is now known as Assumption Pathway School. 22/09/1958:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/bd356a7e-1162-11e3-83d5-0050568939ad>

Gabrielist Brothers' Trade School. The Straits Times, 2 April 1939:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19390402-1.2.30>

Acma 4/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/465310683938266/>

Acma, Taiwanese maker of refrigerators and other electrical products, at its opening in 1967 and now, still in Jurong.

One of the few that has withstood the passage of time.

OPENING OF FACTORY OF ACMA ELECTRICAL INDUSTRIES LTD AT JURONG.

03/08/1967 (Ministry of Information and the Arts).

<http://www.nas.gov.sg/archivesonline/photographs/record-details/cb6d5c85-1161-11e3-83d5-0050568939ad>

Fairchild 2/8/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/462390430896958/>

Another US semiconductor giant, Fairchild, in Toa Payoh.

MINISTER FOR FINANCE HON SUI SEN OPENS TEST AND FINISH BUILDING OF FAIRCHILD SINGAPORE PTE LTD AT TOA PAYOH. Date: 05/08/1975

<http://www.nas.gov.sg/archivesonline/photographs/record-details/e377073e-1161-11e3-83d5-0050568939ad>

Texas Instruments 31/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/460419451094056/>

Texas Instruments Singapore, the US electronics and semiconductor company, in the Kallang Basin, when it was formed in 1969.

It initially hired over 1,000 workers, mostly women, with an average age of 17.5 years.

Source: National Archives of Singapore.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/9ffeb2d8-1162-11e3-83d5-0050568939ad>

U.S. electronics company opens \$6m S'pore subsidiary. The Straits Times, 4 July 1969:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19690704-1.2.118>

disk drives 29/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/457958558006812/>

Companies such as Tandon Corp, Micro Peripherals, Seagate, Maxtor, and Wearnes Technology heralded the birth of the computer hard disk industry in the 1980s.

Singapore became the world's largest producer of disk drives, accounting for half of global output, particularly the 5¼ and later 3.5 inch Winchester drives as personal computers became increasingly popular.

<https://upload.wikimedia.org/wikipedia/commons/b/be/SixHardDriveFormFactors.jpg>

Pioneer workers 26/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/455557288246939/>

We know of pioneer certificates and pioneer industries, but let's not forget the pioneer workers in these industries who were stepping into new working environments in the 1960s.

The pioneer employees in three of Singapore's new industries in 1967: the refining of sugar, and manufacture of bicycles and refrigerators.

EDB Annual Report 1967.

Retraining 24/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/453494058453262/>

Difficult times and returning to school: when the British announced in 1967 that they were going to close their military bases in Singapore, it sparked fears that local employees in the bases would be jobless.

The government formed an inter-ministerial body called the Bases Economic Conversion Department, led by Hon Sui Sen, to deal with the effects of the British withdrawal.

Part of BECD's work was to retrain clerical and other white-collar workers of the bases for industrial work.

PM Lee Kuan Yew explained the reason for retraining in 1968: 'It's no use giving the man five weeks' pay or one month's pay for every year of service – he will spend that and having nothing, he will be on my dole. What I want is to keep up the man's morale and self-respect'.

THE FIRST BATCH OF 600 REDUNDANT CIVILIAN EMPLOYEES OF THE BRITISH SERVICES - MOST OF THEM STILL EMPLOYED - WENT BACK TO SCHOOL TO LEARN BASIC TECHNICAL SKILLS TO PREPARE THEM FOR INDUSTRIAL JOBS. UNDER A RE-TRAINING PROGRAMME LAUNCHED BY THE BASES ECONOMIC CONVERSION DEPARTMENT, THEY REPORTED FOR PART-TIME STUDIES AT SIX TECHNICAL SCHOOLS, THE ECONOMIC DEVELOPMENT BOARD'S WORKSHOP IN RIVER VALLEY ROAD AND THE SINGAPORE POLYTECHNIC. Covering Date: 01/04/1968.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/a8dbb316-1162-11e3-83d5-0050568939ad>

Rollei at Indus Road 22/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/451353945333940/>

The old Rollei plant at Indus Road apparently occupied 2-3 levels of the flatted factory on the right of the photo.

In the middle of the picture, you can see the municipal 'pipeline bridge' in the distance, and on the left is Delta East Primary School (long gone).

I lived in a block of flats behind the photographer in the 1970s.

Contrast with Indus Road today – the flatted factory is gone too.

Thanks to for the lovely old photo!

Builders of Singapore 20/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/449389392197062/>

Builders of Singapore in the 1970s – locals and Malaysians, men and women.

The photo with the HDB flats in the back is of the construction of Philips factory in Toa Payoh in the early 1970s.

By this time, Singapore had reached full employment and was recruiting workers from Malaysia, many of whom were skilled and semi-skilled construction workers.

It's lovely to see the workers take photos at their worksites.

Singapore Polytechnic engineering 18/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/447764669026201/>

Did anyone take engineering, accountancy or architecture DEGREE courses at the Singapore Polytechnic in the mid-to-late 1960s?

They were jointly run for a few years with the University of Singapore, which eventually took over the degree courses (and some of the Poly's staff).

Caption: STUDENTS OF REFRIGERATION ENGINEERING AT WORK AT SINGAPORE POLYTECHNIC. Covering Date: c.1970:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/32019afe-1162-11e3-83d5-0050568939ad>

Technical workshops 15/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/444927942643207/>

Do you remember technical workshops/classes at lower secondary level? Not my fondest memories but some of my classmates enjoyed them!

In 1971, Sec 1 students received workshop training in 3 subjects: Metalwork, Woodwork and Electricity.

TANJONG KATONG SECONDARY SCHOOL STUDENTS DURING TECHNICAL CLASS IN THEIR SCHOOL WORKSHOP. 28/10/1970.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/a0825efe-1162-11e3-83d5-0050568939ad>

PSA's Dockyard Training Centre 12/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/442410702894931/>

The first batch of 20 apprentices being trained at the Port of Singapore Authority's Dockyard Training Centre at Keppel Harbour in 1967, to provide manpower for the expansion of the marine industry.

1,200 people applied for 60 places in the apprenticeship scheme. The standard of apprentices was very high, according to Swan Hunter, the managing agent for the dockyard.

They were trained to become fitters, shipwrights, welders etc, and also attended courses at the Singapore Polytechnic and Singapore Vocational Institute.

THE PORT OF SINGAPORE AUTHORITY'S \$400,000 DOCKYARD TRAINING CENTRE HAS STARTED ITS FIRST TRAINING COURSE. THE FIRST BATCH OF TRAINEES ARE 20 APPRENTICES WHO ARE UNDERGOING A GENERAL INDUCTION COURSE. 01/08/1967.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/9e809aae-1162-11e3-83d5-0050568939ad>

Board approves programme to buy new equipment. The Straits Times, 28 April 1968.
<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19680428-1.2.70>

Rollei-Singapore Training Centre 10/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/440643499738318/>

Graduates in precision mechanics and optics, and tool and die-making from the Rollei-Singapore Training Centre, which was jointly set up by Rollei and the Singapore government.

Rollei ultimately failed but from the start, Singapore's aim was not only for the company to set up production and create jobs, but also to help train locals in technical skills.

In 1971, when Rollei was established, Minister for Finance Hon Sui Sen urged young people to take up a career in precision engineering.

Rollei-Singapore Training Centre was subsequently renamed Brown Boveri-Government Training Centre, formed in collaboration with another West German company, BBC Brown Boveri Singapore, which manufactured electrical products.

Photo from from Rollei-Government Training Centre, Annual (Singapore: Rollei-Government Training Centre, 1975).

Precision industry's big leap forward. Straits Times, 21 March 1971.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19710321-1.2.35>

Apprentices 8/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/438663839936284/>

Apprentices in training centres: learning the trade outside of school but in a modern setting, such as Sembawang Shipyard's training centre.

Source: The SS News (Sembawang Shipyard newsletter), 1872, 1976.

Singapore Polytechnic 5/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/436156423520359/>

The original Singapore Polytechnic campus at Prince Edward Road.

At the time, in 1958, you needed a credit in English to qualify for admission, and you would study liberal arts subjects. You were likely to be a working adult.

After 1959, the new government scrapped the liberal studies and opened admission to full-time students, especially graduates of the Chinese middle schools. But you still needed some English – a pass – and some Chinese-stream Polytechnic students formed study groups to teach each other English.

Established in 1954, Singapore Polytechnic was the first polytechnic in Singapore. c.1958:
<http://www.nas.gov.sg/archivesonline/photographs/record-details/d5cdda20-1161-11e3-83d5-0050568939ad>

Queenstown Technical School 3/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/434371603698841/>

To round off the early technical schools is Queenstown Technical, also established in 1956 along with Tanjong Katong Technical.

In addition to these English-medium schools, two Chinese-medium schools also offered technical subjects, Hua Yi and Dunman Middle Schools.

Working in singlets!

STUDENTS AT WORK AT QUEENSTOWN TECHNICAL SCHOOL. 04/07/1970:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/a51a601a-1162-11e3-83d5-0050568939ad>

TRAINING IN TRADE SCHOOLS FOR 1,820. The Singapore Free Press, 7 November 1959:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/freepress19591107-1.2.64>

Tanjong Katong Technical School 1/7/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/432676707201664/>

Tanjong Katong Technical School – one of two new technical schools set up in 1956 in an early effort to propel Singapore’s industrialisation.

It’s since been renamed Tanjong Katong Secondary School.

Do you know which was the other technical school formed in 1956?

<http://tanjongkatongsec.moe.edu.sg/about-us/our-rich-heritage/>

Junior Trade School 28/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/429834830819185/>

The Junior Trade School at Balestier ran 2-3 year courses in mechanical, electrical engineering and building construction.

In 1960, there was a ‘big rush’ from 1,500 primary school students to enrol in the school (which had 2,000 vacancies), as part of the expansion of technical and vocational education in Singapore.

The students used simple woodwork and metalwork tools to make letter racks, trays and other small items.

Yang Di-Pertuan Negara Yusof Ishak (second from left) watching a student doing welding work in class at Balestier Junior Trade School. 18/09/1962:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/b2ddf408-1162-11e3-83d5-0050568939ad>

1,500 APPLY FOR PLACES IN THE JUNIOR TRADE SCHOOL. The Singapore Free Press, 28 November 1960:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/freepress19601128-1.2.79>

Goh Tjoei Kok 26/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/428186410984027/>

Goh Tjoei Kok was one of the founders of National Iron and Steel Mills.

He left Fujian for Jakarta in 1920 at the age of 15. In 1949, he moved to Singapore where he later set up Tat Lee, a rubber import-export company.

Tat Lee and Sim Lim, a local company with interests in building materials and shipbreaking, jointly established National Iron and Steel Mills in 1961, with the government having a

minority stake. Goh was the vice-chairman of the company, and the first chairman was Soon Peng Yam of Sim Lim.

Luck? Goh wouldn't bank on it. BUSINESS TIMES, 6 July 1982:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/biztimes19820706-1.2.25>

Battle of the beers 24/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/426340377835297/>

'Battle of the beers' in 1972, with Malayan Breweries' Tiger in Singapore facing new beers from Guinness, and a new brewery recently set up by Carlsberg in Kuala Lumpur.

Demand for Tiger was also affected by the withdrawal of the British forces from Singapore and Malaysia.

On the plus side, the growth of Singapore's hospitality industry has increased the consumption of beer.

Ilsa Sharp, 'Battle of the Beers'. Singapore Trade and Industry February 1972.

Garment industry 21/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/423570991445569/>

Mean basic pay per hour in the garment industry from a study in the mid-1980s:

Seamstresses: \$2.70

Ironers: \$2.90

Cutters: \$3.50

Packers: \$2.30

Supervisors: \$6.00

Mechanics & electricians: \$5.30.

60% of the employees were Singaporeans, the remainder being Malaysians.

The survey found that garment workers generally did not hop jobs, working in the same factory for up to 4 years on average. This was a significant change from the 1970s where there were numerous reported cases of job-hopping.

The usual welfare benefits for garment workers were free accommodation in a hostel, company dinners, picnics and overseas trips, and free transport.

Source: Survey of Wages in Garment Industry. Prepared for Singapore Textile and Garment Manufacturers' Association. Singapore: Survey Research Singapore Pte Ltd, 1987.

Second Deputy Prime Minister and National Trades Union Congress (NTUC) Secretary-General Ong Teng Cheong (left) being shown the different stages of garment-making in Great Malaysia Textile Manufacturing's highly automated factory in Tanglin Halt Road. With him (from left) are Vice-President of NTUC and Member of Parliament for Yuhua Yu-Foo Yee Shoon (second) and Deputy Director of NTUC Ng Pock Too (third). 03/04/1987:
<http://www.nas.gov.sg/archivesonline/photographs/record-details/fb39ef08-1161-11e3-83d5-0050568939ad>

Alexandra Industrial Estate 19/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/421760624959939/>

One of the early industrial estates, Alexandra Industrial Estate, in 1961.

Among the pioneer industries there was a pharmaceutical company, Mizrahie & Co., which manufactured vitamins and aspirin.

General view of Alexandra Industries Development Areas and Factories (Industrial Estates). 31/03/1961.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/efc2c124-3fac-11e4-859c-0050568939ad>

New plant for Singapore. The Straits Times, 16 June 1961.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19610616-1.2.129.6>

Tanglin Halt industrial estate 17/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/420187721783896/>

EDB's first flatted factory at Tanglin Halt industrial estate.

Mr Hon Sui Sen, chairman of the EDB, said flatted factories were not an innovation, as they existed in Denmark, Netherlands and Hong Kong.

In 1964, Singaporean officials visited Hong Kong to study how flatted factories could be built in Singapore.

National Archives of Singapore, 30/05/1965:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/c2f64634-1161-11e3-83d5-0050568939ad>

The multi-storey factories. The Straits Times, 18 August 1964:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19640818-1.2.51>

Pottery 14/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/418064605329541/>

Industrial research in the early days (1960s) was diverse.

One of the industries studied by the Ministry of Finance was pottery, including the countries where ceramic raw materials could be found and the different methods of making and shaping pottery.

Margaret Woo. Pottery. Economics Section, Ministry of Finance, 1968.

CHINESE POTTERY MAKER. 05/1972:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/daced3a2-1161-11e3-83d5-0050568939ad>

Retrenchment 12/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/416852598784075/>

Retrenchment is a hard part of Singapore's industrialisation, and every generation of workers, supervisors and managers have suffered, or feared, the retrenchment axe when their company folded or relocated overseas, or when their industry was affected by an international economic or financial crisis.

Story here of Mr Lim who lost his job at Union Carbide after 28 years during the 1985 recession in Singapore, which affected both blue-collar workers and PMETs. He was one of a number of retrenched employees who decided to venture out into business.

What are your memories of retrenchment and economic downturn?

Coping with economic recession: 'Now I intend to go into hawker business'. Singapore Monitor, 17 March 1985:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/singmonitor19850317-1.2.4>

Hitachi 10/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/415977535538248/>

Hitachi Consumer Products was a joint venture between Hitachi Japan and minority local partners, formed in 1972.

It initially operated a factory at Boon Keng Road making transistor radios and audio cassettes.

One of several Hitachi factories in Singapore and an example of Japanese industries' role in the early industrialisation programme.

MINISTER FOR SOCIAL AFFAIRS OTHMAN BIN WOK VISITS HITACHI & COMPANY. 06/08/1975:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/e0ce23f9-1161-11e3-83d5-0050568939ad>

Hitachi jobs for 1500. *New Nation*, 5 November 1974:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19741105-1.2.32.1>

Closure of Rollei 7/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/414575225678479/>

At the Memories of Rollei Singapore sharing session in April, I asked three ex-Rolleians about how they felt at the closing of the company:

Mr Chong: I felt sad for Rollei but I didn't feel sad. Rollei trained precision engineering personnel and also produced many entrepreneurs. Some former employees went back to Rollei to buy the machinery and set up their own companies. A few bought most of the standing and moulding machines from Rollei to set up a plastic moulding company at Kallang Junction which proved to be very successful.

Mr Lim: I was not sad as there were many jobs outside. I later worked on optics at Carl Zeiss, and then at Micropolis.

Mr Kamaruddin: When we heard that Rollei was in the Court of Liquidation, everyone was shocked. It was announced after lunchtime. Girls were crying. I later joined inventory control at Micropolis. It was not difficult to find a new job; having Rollei on the CV definitely helped.

Industrial land-use 5/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/413808535755148/>

Industrial land-use in Singapore in 1960, 1988 and 2015, as industrial estates appear, grow, transform, renew, and disappear.

Koninck, Rodolphe de, Pham Thanh Hai and Marc Girard. *Singapore's Permanent Territorial Revolution: Fifty Years in Fifty Maps*. Singapore: NUS Press, 2017.

Dry dock 3/6/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/413062165829785/>

Opening of new 400,000-ton dry dock at Sembawang Shipyard in 1975, 6½ years after the British naval dockyard was handed over to Singapore and converted into a commercial shipyard.

The number of workers in the shipyard in 1975 had exceeded the number in the dockyard, while the income generated had risen five times.

Newsletter of the Singapore Association of Shipbuilder and Repairers. May 1975.

View of VLCC (very large crude carrier) at Sembawang Shipyard's new \$50 million 400,000-ton dry dock at its official opening by Prime Minister Lee Kuan Yew. 25/05/1975:
<http://www.nas.gov.sg/archivesonline/photographs/record-details/5bc97e7a-1162-11e3-83d5-0050568939ad>

Science and tech 2 31/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/411904652612203/>

More science and tech behind Singapore's industrialisation – lenses, precision engineering, tool and die, and some of the men and women in the industries.

Ministry of Science and Technology. Science and Technology for 2 Million. 1975.

Science and tech 29/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/411172512685417/>

Some of the science and tech behind Singapore's industrialisation.

Ministry of Science and Technology. Science and Technology for 2 Million. 1975.

Mdm Noorsia and 115 Commonwealth Drive 27/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/410401869429148/>

Mdm Noorsia worked for an electrical company in the flatted factory at 115 Commonwealth Drive for 9 years beginning in 1987.

She was 24 at the time and her pay was \$800. She was also given a transport allowance but she lived nearby and simply walked to work.

Seated on a stool in front of a machine, she assembled and checked electrical irons, hair dryers, CD players, transistors, and CD drives.

Mdm Noorsia worked the night shift, which she did not find tiring and which allowed her to cook for her children when she returned home.

The financial situation at home was often difficult but at work she found a good employer and colleagues with whom she exchanged jokes. She remembers the company's annual dinners fondly.

The strikingly coloured flatted factory is reportedly Singapore's oldest and otherwise nondescript. But in its time, like other flatted factories built in the 1960s and 1970s, it was an

infrastructural technology which allowed industries to be located near dense population areas and support the industrialisation of Singapore.

With Juria Toramae and Kwek Li Yong.

The flatted factory that made history: Inside 115 Commonwealth Drive.

<https://www.channelnewsasia.com/news/singapore/the-flatted-factory-that-made-history-inside-115-commonwealth-8752052>

Captains of Industry 25/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/409641249505210/>

The ‘captains of industry’ in the January 1974 issue of Singapore Trade and Industry, comprising the bosses of the leading banks (OCBC, UOB, DBS), shipyards (Sembawang Shipyard), hotels, and trading and manufacturing companies (Intraco, Prima Flour, Hume Industries, Jack Chia group etc) in Singapore.

Philips then and now 23/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/408885286247473/>

The Philips factory in Toa Payoh then, when Lam Chun See interviewed for a job there in 1978, and now, when we visited it last Sunday in our documentation of old factories in Toa Payoh.

<https://www.singaporememory.sg/contents/SMA-76493033-29b1-4f98-8c25-8a34ad6c5e61?nextrecord=8&listtype=searchResult&id=SMA-76493033-29b1-4f98-8c25-8a34ad6c5e61&pagenm=1&startrec=1&type=memories&keyword=philips&memory=SMA-76493033-29b1-4f98-8c25-8a34ad6c5e61>

Life as mere existence 21/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/408182319651103/>

Life is mere existence, YWCA’s survey on the young female workers of Jurong concluded in 1971.

The majority of these workers were dropouts from Chinese-stream schools who worked to support themselves and their low-income families.

Many of them worked in the garments and textiles industries earning \$2.50-4 a day.

What was your experience of work? What were the highlights and low points?

Life is mere existence for these Jurong workers. New Nation, 13 December 1971, Page 9
<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19711213-1.2.45>

Food industries 18/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/407116603091008/>

Food is very much on the menu these days as part of the rich intangible heritage of Singapore.

What should also be part of our food heritage are the early F&B industries.

Here is a nice article from 1961 on Singapore's canned food exports (including curries!), and by two well-known local manufacturers, Amoy Canning and Yeo Hiap Seng, building on their traditional soy sauce business.

This was to meet growing Western demand for Asian food, which is a more recent corollary of the spice trade of pre-colonial Singapore and Southeast Asia.

Many of the ingredients for the canned food – and the tins and labels – were manufactured in Singapore and Malaya but some were imported: soya beans from China, sugar from Taiwan (Formosa), beef and mutton from Austria, and curry ingredients from India.

Singapore Trade and Industry, March 1961.

Swan Socks 16/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/406298686506133/>

In 1964, Swan Socks Manufacturing Co. (Malaysia), which was granted pioneer status the previous year, opened Singapore's first socks factory at Jalan Tukang in Jurong.

It initially employed 70 workers, which rose to 500 a few years later.

As Mr Fong Ah Ngow, a former employee, recalled, the men worked the machines on a starting pay of \$4 a day, while the women cut the socks, earning a dollar less.

Source: Straits Times 27 December 2016.

Women workers at factory of Swan Socks Manufacturing Company (Malaysia) Ltd located at 7 Lorong Tukang Empat in Jurong. The company was a joint venture between Siakson Trading Company Ltd of Singapore and three Japanese firms. The participating Japanese firms in this venture were Toyo Rayon Company of Tokyo, Ataka & Company and Ikeo Socks Company of Osaka. It was granted pioneer status by the Singapore Government and officially opened by the then Minister of Finance Dr Goh Keng Swee. 26/10/1964.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/c166e772-1161-11e3-83d5-0050568939ad>

Lea Hin 11/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/404548380014497/>

Lea Hin memories.

'As a child, I marvelled at the way the locally manufactured “Lea Hin” steel windows worked as an ingenious gadget. Window stays varied the positions of top and bottom panels as the weather dictated. When it rained, the bottom panel had to be closed, but the horizontally pivoted top panel could remain open, allowing for ventilation while throwing off rain water.'

Ho Weng Hin, Reminiscences on a HDB Point Block, s/pores 25 Jul 2009.

<http://s-pores.com/2009/07/hdbblock/>

Ice cream factory employees 8/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/403267826809219/>

Fun fact:

During the year, 227 employees of ice cream factories were sent to Middleton Hospital (the infectious disease hospital in Singapore) to check as to whether they are typhoid carriers.

This is done every year.

1961 Ministry of Health Annual Report.

ICE-CREAM CART, SINGAPORE. 1901-1940.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/af06cd86-1161-11e3-83d5-0050568939ad>

Lookout tower on Jurong Hill 6/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/402716556864346/>

The lookout tower on Jurong Hill in 1969, which gave an impressive view of the expansion of Jurong Industrial Estate to 2 important groups of people – locals and foreign visitors.

Source: JTC Annual Report 1969.

Pioneer Road North 4/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/401963433606325/>

Pioneer Road North was home to two of Singapore's manufacturing SMEs set up by local entrepreneurs in the 1980s: Mr Lim Kian Heng of Carport and Mr Henry Yeo of Acez Instruments.

SMEs like these provided support services such as maintenance and repair to the multinationals in Jurong, and therefore played a role in the industrialisation of Singapore.

Source: JTC, <http://www.jtc.gov.sg/news-and-publications/featured-stories/Pages/stories-of-pioneer-road-north-industrial-estate.aspx>

Satay and food industry 2/5/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/401133440355991/>

The food industry is among the oldest in Singapore, and here are historical culinary notes on some local favourites from a survey before the war in 1940:

Beef satay: Ingredients are beef, garlic, onions, ginger, coriander, cucumber, aniseed. 1 cent per stick and 1 cent per kutupat.

Rojak: 3 cents per plate.

Curry puff: 1 cent each.

Source: N.A. Canton et al. Chemical Analyses of the Foods of Singapore. 1940. Many thanks to Dr Geoffrey Pakiam for sharing his research with me!

Chong Pang 30/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/400399563762712/>

I was having noodles at Chong Pang market in the late afternoon when an elderly Arab lady sat down at my table with a glass of warm water. She asked if she could sit, I said of course and we talked.

It turns out Mdm S. is about 70, speaks halting English (but good enough to understand) and spent many years in the hospitality and F&B industry. I think she still makes kueh part-time – her husband has passed away and she lives alone.

I found out she also worked at General Electric, making TV boards, which was in Kallang where she lived previously. Her cousin was working at Texas Instruments (also in Kallang) and she had wanted to join him/her, but her husband initially said, no, no, no, you cannot work. In the end she had her way and joined the workforce, working even after she had children, moving from industry to industry, place to place.

I told Mdm S. I want to know more and left her my card to call. She wouldn't give me her number, saying she can't speak English. I told her I will bring a student who can speak Malay. She gave other reasons. I told her to call me as I left. I hope she does.

**MINISTER FOR CULTURE & SOCIAL AFFAIRS OTHMAN BIN WOK VISITS
SELANGOR PEWTER (PRIVATE) LIMITED, GENERAL ELECTRIC (USA) AND
TELEVISION & APPLIANCES (PRIVATE) LIMITED. 29/05/1971**

<http://www.nas.gov.sg/archivesonline/photographs/record-details/d7877150-1161-11e3-83d5-0050568939ad>

Blind workers 26/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/398691983933470/>

Some of the blind workers in Singapore and their occupations (many of them casual or menial) in 1972.

Blind workers were doubly handicapped because they lacked training facilities and opportunities.

The article calls for a tripartite organisation to be set up which would help them obtain vocational training or retraining to find employment.

Singapore Trade and Industry October 1972.

The garment industry 24/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/397908560678479/>

A brief history of the garment industry: the number of garment factories in Singapore grew from 61 in 1965 to 392 in 1982, and the number of employees from 4,573 to 28,469.

Mostly of these factories were small, employing less than 20 employees.

In 1982, three-quarters of the garment factories were local while a fifth were joint ventures with the government.

Foreign-owned garment factories made up only 4% of the number, but they were large companies, mostly from Taiwan, Hong Kong and South Korea.

Most of the garments were for export, to Malaysia, UK and Hong Kong in 1965, and to the US, West Germany, UK, and France in 1982. By this time, exports dropped due to protectionism in many of these countries.

In the mid-1970s, many factories faced a labour shortage as 70% of their employees were young women, who often quit after marriage. They had to employ a large number of foreign workers.

In 1979, Singapore moved towards a capital-intensive economy, raised wages and labour costs for the garment industry. Some factories relocated to neighbouring countries where wages were lower.

Source: Li Hua. An Overview of Garment Industry in Singapore. 1983. 李华, 新加坡的服装工业概况, 1983.

MINISTER OF FINANCE DR GOH KENG SWEE TOURS WING TAI GARMENT FACTORY DURING ITS OPENING. 13/09/1963:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/bdb1071c-1161-11e3-83d5-0050568939ad>

Singapore Polytechnic Engineering Society 22/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/397117330757602/>

What a lovely find from Mr Lai Park On, who showed me copies of the first two issues of the organ of the Singapore Polytechnic Engineering Society, The Generator.

One of the Society's aims was to help Singapore Polytechnic students see industry and engineering first hand.

In 1960, it organised visits to Shell's oil factory at Woodlands, 15¼ Mile Bukit Timah Road, United Engineers; Pasir Panjang Power Station; and the Singapore Harbour Board.

Momentous times under the newly-elected government of Singapore: Singapore Polytechnic (formed in 1958) would become an institution for full-time students.

Previously most of its students were part-time working adults, but now they would be full-time students newly-graduated from secondary schools, including Chinese-stream students.

On the important role of engineering students in Singapore's industrialisation:

'the state of Singapore now lies in the transitional stage between two eras, but whether the new era will be epoch-making depends partly on the future graduates of the Polytechnic – YOU – the technical hands without which industrialisation can only exist on paper'.

- The Generator, Vol. 1 No. 2, February 1960.

Plastics 20/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/396274260841909/>

The plastic industry in Singapore grew in the 1970s, making toys, bags, containers, plates, pails, and other household products for local use and export.

In 1972, there were over 130 plastic manufacturing firms employing more than 5000 people, such as Blue Box Toys, Rex Plastics Industries and Singa Plastics.

Singapore Trade and Industry March 1972.

Tiger Balm 18/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/395414357594566/>

The factories and workers of the tiger and the leopard.

Singapore Trade and Industry July 1961.

Lai Park On and technical courses 16/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/394587331010602/>

Mr Lai Park On showed me certificates of the many technical courses he completed, in Singapore and overseas, in the 1950s-1970s:

Singapore Polytechnic.

Teachers' Training College.

National Productivity Centre.

Tochigi General Vocational Training Centre (in Japan).

Vocational Training Bureau (Japan).

City & Guilds of London Institute.

He had decided upon graduating from Raffles Institution that instead of going to university, he would join the workforce earlier.

Rollei sharing 12/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/393041511165184/>

This Saturday's sharing by former staff of Rollei Singapore is filled, but you can walk in on the day to see if seats have become available.

A sneak preview: Technicians of Rollei off to Braunschweig, Germany for training.

Memories of Rollei Singapore: Sharing by a panel of ex-Rolleians

<https://www.heritagefestival.sg/programmes/memories-of-rollei-singapore-sharing-by-a-panel-of-ex-rolleians>

Hong Kah Village 10/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/392167684585900/>

Old Hong Kah Village at Jurong 12th Mile.

Photos from Mr Lim, whose family was resettled there from a farm in Toa Payoh in the mid-1960s.

There was originally only a small hut at their new home but they built a bigger house.

Mr Lim studied in Sin Nan Chinese School (primary) and then Jurong Secondary School.

Living in Jurong, his parents continued to do their shopping at Beauty World 7th Mile, but he preferred the more trendy clothes in Taman Jurong.

There, he met the numerous Malaysian workers in the 1970s, even picking up their slang and accent: “这几多钱?” (how much is this?).

Shipbreaking 8/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/391391407996861/>

Shipbreaking by hand in 1960 – one of the early industries Singapore pursued partly because it provided jobs, and partly because the scrap would support the iron and steel industry.

Source: Singapore Trade and Industry, July 1961.

Bata 3/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/389403088195693/>

The story of Bata: ‘the shoemaker to the world’.

In 1931, the Bata Shoe Company was established in Singapore following a visit by its Czech founder, Thomas Bata, to Malaya.

Bata shoes were apparently popular in Singapore and the region, being affordably priced for the lower-income group as Thomas Bata had intended.

The Bata factories in Singapore and Klang in Malaya produced over 300 styles of shoes and employed over a thousand people (although I personally remember only the pearl white badminton shoes).

Lovely pictures of the workers in the Bata factories.

From: Singapore Trade and Industry, July 1962.

Jalan Lama 1/4/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/388498918286110/>

It was really good to interview Mr Koh, a retired educator, whose first school posting was Jalan Lama Secondary School along the old Jurong Road in 1968.

This was around the time JTC took over and Jurong was still largely rural. His students, Mr Koh said, were the 'salt of the earth'.

They were mostly from farming families in the area, Chinese-speaking and lower-income; some of their parents were beginning to work in the factories of Jurong to the south.

There was a Chinese village called Ong Lee Village near the school. There were still crocodiles in Jurong River.

Mr Koh was a PE teacher and would take his students on cross-country runs in the area. He tried to impress them the importance of learning English so they could get good jobs in the future.

The students, he surmised, were not academically inclined but they were physically strong, generally resilient towards life and good-natured. He felt the school gave a good start as a new teacher.

Taman Jurong to the south was a 'wilderness' in the day till the workers returned to their flats after work. The urbanisation of Jurong was happening, nevertheless.

Mr Koh left the school two years later. In 1982, he moved into a flat in Jurong. He liked living in the rustic environment of Jurong Town, and still does.

Map: 1969 Street Directory.

MNCs 30/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/387646211704714/>

10 multinationals in Singapore, 1978.

How many of them are still around?

Source: JTC Annual Report 1978.

Soft drinks 28/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/386803371788998/>

Here are some fond memories of the soft drinks of the past:

There were more flavours and options then, and even 'aerated wars': F&N's Red Lion was up against Amoy Canning's Green Spot, but could not compete with the Californian oranges, grown in Pasadena district, used in Green Spot.

1961 saw the arrival of 7 Up, bottled by F&N, which defeated its rival, Bubble Up, from Amoy Canning.

National Aerated Waters bottled RC Coke (and Kickapoo and Sinalco), but it was unable to oust the 2 leaders, Pepsi Cola and Coca Cola.

There was a brand called Canada Dry in the 1970s, which tried to compete with F&N but closed a decade on. It had many flavours: orange, lemon, strawberry and cherry.

For the lower-income group, the cheaper alternative to soft drinks was syrup water.

Soft drinks are best drunk chilled, not with ice!

From Nguyen Ly's interview with Alex Tan, 16 Mar 2018. His favourite drink is Coca Cola (as all his friends know).

The shop front of Snack & Bar No. 2 at National Theatre with interesting images of advertisement of popular soft drinks of the time, including coca cola, seven up and root beer. 28/08/1963.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/bd5a1c6f-1161-11e3-83d5-0050568939ad>

Jurong workers and their work 26/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/385997738536228/>

What would you say about your previous work and job?

The most common reply from workers in the past seemed to be 'nothing to say' or 'boring', such as one worker who packed air-conditioners into boxes: 'Every day I do the same old thing. It is very uninteresting and boring but I'm used to it now'.

But in fact many workers had interesting things to say, if you listen closely.

Note the final sentence from another worker in a sawmill: 'My work? There is nothing to talk about. You know the usual routine. I am ordered here and there. Track away bits and pieces of wood chips from the production line. Sometimes I have to sweep the floor too. They won't give you a chance to rest'.

And another worker: 'My job is to see the machine runs smoothly. When it breaks down I will have to sweat to death'.

So it's worthwhile listening even when people dismiss their work – there's often something to learn even if it's not what you are looking for.

From a study of 15 male Singaporean workers living in dormitories in Taman Jurong, 18-26 years old, mostly unskilled and Chinese-educated.

Chang Yung Yee. The Young Chinese Factory Workers at Jurong. Diploma in Social Studies. Department of Social Work. University of Singapore, 1973.

PRIME MINISTER LEE KUAN YEW (CENTRE) SPEAKING TO A FACTORY WORKER DURING HIS TOUR OF JURONG INDUSTRIAL ESTATE. 02/05/1965:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/2be1856f-1162-11e3-83d5-0050568939ad>

Mdm Yee, long sai 21/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/383873338748668/>

Last week I interviewed Mdm Yee, who worked as a ‘long sai’ when she was 12 or 13 (hence an underage worker) in her free time from school. This was around 1960.

‘long sai’ is a Chinese corruption of ‘alongside’, referring to the mostly Cantonese women who scrapped and cleaned the hulls and insides of ships in the past.

Armed with a metal scrapper, Mdm Yee accompanied her mother in the morning to the town area bounded by Banda Street and Neil Road, where they waited in hope to receive work tickets from the formidable lady in charge they called Big Hen No. 6.

The most dangerous part of the work, Mdm Yee said, was not the cleaning but climbing the ropes from the tongkang to reach the ship. One slip and one would fall into the water.

There was no safety equipment and she often had ‘baluku’ (bumps and bruises) on her head.

Mother and daughter worked to pay the rent (they lived nearby) and support the family. Mdm Yee never felt resentful about having to work as a long sai at such a young age.

Subsequently she graduated from school and joined the hospitality industry, then sold insurance. She is in a happy place today, and still active and sprightly.

Redhill and Alexandra 18/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/382585178877484/>

Some factory sites we visited today on our team’s photo-documentation of Redhill and Alexandra.

Female factory workers in Jurong 15/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/381180745684594/>

What was the world of female factory workers in Jurong Industrial Estate in the 60s and 70s?

Some interesting insights from a university student's study of 49 young female workers in 1968.

Why did the workers want to work in Jurong?

'I thought it would be quite exciting to do my own cooking and washing, for once my mother would not be around to tell me not to do this or not to do that'.

'I cannot stay at home doing nothing'.

What did they feel about their work?

'It is so dull'.

'Nothing much to talk about it, you can learn it just by looking at it'.

Their employers?

'The Taiwanese are the most stingy group of people I know' (others said the same about Japanese and Swedish companies).

What also stood out was the camaraderie among the female workers for social, safety and economic reasons. Closely knit, they sent a 'don't you dare' message to management: if they were poorly treated, they would resign as a group and leave.

Source: Chew Beng-lan. The Young Woman Worker at Jurong. Academic exercise. Department of Social Work, University of Singapore, 1968.

Princess Alexandra of United Kingdom and her husband, Mr Angus Ogilvy, visiting Regency Wigs factory in Jurong. 11/08/1969.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/cffb70b3-1161-11e3-83d5-0050568939ad>

Bodies at work 13/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/380394425763226/>

Bodies at work:

- Workers and fitters of Shell on Pulau Bukom, The Shell Endeavour: The First 100 Years in Singapore.
- Retraining at Sembawang Shipyard, The SS Newsletter 1971.

- Hume Industries, Straits Times Annual 1977.
- Scooter assembly, EDB Annual Report 1968.
- Fishing competition at the Lantern Festival at the Chinese Garden, JTC Annual Report 1981.

King's shoe factory 11/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/379514842517851/>

Somehow still on the subject of shoes: the taxi driver who ferried me home from the airport worked in a shoe factory in Kallang in the 1970s.

This factory had a name that sounded like 'Yi Heng'. It was small and the owner was from Hong Kong.

The driver also said it was near another shoe factory that is better known – King's, a maker of safety shoes.

Anyone remember either factory in Kallang Industrial Estate?

King's ad in The Straits Times, 28 June 1970:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19700628-1.2.129.2>

Toh Chin Chye's visit to Rollei in Indus Road 5/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/376907416111927/>

Dr Toh Chin Chye, Minister for Science and Technology, visiting the Rollei factory in Indus Road in 1972.

The factory is long gone but the documentation team will be going to the site in the middle of this month as part of our coverage of old industrial Redhill and Alexandra.

Source: Rollei News Vol. 1 No. 1 and 2, 1972.

SISIR Made in Singapore 1/3/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/375223712946964/>

The Made in Singapore mark for locally-made products, issued by SISIR, the Singapore Institute of Standards and Industrial Research.

Source: Singapore Trade and Industry, September 1972.

Mdm Suppammal at Fairchild 27/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/374064956396173/>

I interviewed another of the remarkable Fairchildren yesterday – Mdm Suppammal, who was a production operator in the bonding department in the 1970s.

She joined Fairchild to support her six young daughters and worked there for nearly 10 years.

What was most interesting about Mdm Suppammal was her mindset towards work. She was totally committed at work, while some colleagues might be chatting.

I think for Mdm Suppammal, working at Fairchild provided her with a freedom of sorts away from home, giving her a special identity as an employee who always delivered.

As she told me with pride, ‘not one unit of her wiring has been rejected’. She even had to get the help of the union for Fairchild to release her at the end.

Mdm Suppammal was interviewed by the Straits Times in 1972, when her family had just moved into one of the shophouses at Toa Payoh Central, where she still lives. We will ask her to join us on our photo-documentation of industries in Toa Payoh.

Housewife by day, worker by night. The Straits Times, 6 June 1972

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19720606-1.2.115.1>

Mdm Devi at Fairchild 25/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/373231766479492/>

Mdm Devi, daughter of Fairchild. Beginning in 1973, she worked at the US semiconductor’s factory in Toa Payoh for 18 years, even after Fairchild was acquired by National Semiconductor.

Except in her final year, Mdm Devi worked the night shift from 11 pm to 7 am, as did many other local housewives.

The night shift was physically tiring but what was as difficult was her children seeing her leave for work at night and coming home in the morning when they were about to go to school.

Her daughter Mona said, ‘When mum is sleeping, we cannot disturb her or else we will get caning’.

Mdm Devi’s initial pay was \$2 a day, and her final drawn pay in 1990 was \$886. That year, she was retrenched from NS along with other workers, and retired.

But she has fond memories of her time at Fairchild: her work, the annual dinner, and Family Day at Sentosa.

It was great listening to Mdm Devi remember the past together with her daughter and two grandchildren.

She shared with me her old certificates at Fairchild, and her many photos in a pink uniform together with her colleagues – her close friends whom she misses dearly.

Orchid Soap 21/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/371356633333672/>

Soap was one of Singapore's oldest manufacturing industries.

But the industry was struggling in the early 1960s when Malaya imposed tariffs on the import of soap from Singapore.

This article in the Singapore Trade and Industry bulletin of January 1965 sounds a note of optimism – Lam Soon, the well-known cooking oil company, had opened a factory in Jurong to manufacture the 'Orchid' brand of toilet soap, and washing soap.

Lam Soon imported what was then advanced soap-making machinery from Italy.

National Semi-conductor 19/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/370462336756435/>

Employees of National Semi-conductor at the factory in Lower Delta in 1986.

NS was a major American manufacturer of semi-conductors and integrated circuits commonly used in computers and other industrial products, which began production in Singapore in 1968.

Four years later, when a new plant was set up in Penang, 15 technical and supervisory staff from the Singapore factory went there to train the Malaysian workers, while 15 Malaysians also came to work temporarily in the Singapore plant.

NS employed about 2,500 workers in Singapore at the time.

Photo: THE NATIONAL DAY OBSERVANCE CEREMONY AT THE NATIONAL SEMI-CONDUCTOR FACTORY, 1100 LOWER DELTA ROAD. 12/08/1986:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/f8ea896c-1161-11e3-83d5-0050568939ad>

Aid in electronics. New Nation, 15 January 1972, Page 2:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19720115-1.2.25>

Car assembly 16/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/368991960236806/>

3 well-known manufacturers of Western cars in Singapore in 1972: Ford, Associated Motors and Cycle & Carriage.

They faced intense competition from cheaper Japanese cars made by Datsun, Toyota and Mazda, even in Singapore where imported cars are subject to a 35% import tax and higher registration fees.

Western carmakers based in Singapore would also soon face the end, when the country began to move away from car assembly and other labour-intensive industries in the 1970s and 1980s.

Interestingly, some of NTUC's Comfort taxis were Morris Oxford models produced in the Associated Motors plant here.

Our photo-documentation team found the old factory site of Associated Motors in Jurong, now occupied by Renault.

Source: Straits Times, Singapore Trade and Industry, 1972.

Kallang Way factories 13/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/367840967018572/>

Our team went down to Kallang Way last Sunday to photo-document the JTC factories which had stood there in 1975.

Alas while the old Sanyo Electronics building, now painted bright yellow and blue and used as a storage space, was still there, the terrace factories opposite are disused and seemingly slated for demolition.

Do you know someone who worked there in the 1970s?

Map from JTC Directory Industrial Estates Singapore, 1975.

Ladies of Fairchild 11/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/367135233755812/>

This is lovely: the women of Fairchild in their own words – part of a modern generation of female employees and family breadwinners from the 1960s.

Rugina, a female supervisor: I cannot help feeling that I am being underestimated or overlooked by my male colleagues. A female supervisor generally finds it very difficult, if not impossible, to command respect from her female subordinates...

A female supervisor, I suppose, has a distinct advantage over her male colleague in that she is more sensitive to the social problems that her female subordinates may face.

Angeline Teh, production supervisor, on her male colleagues: I feel good to think that I am 'at home with the family'. When I am down, down the hill, they will charge to my rescue. To them I am ever grateful; they are my 'sunshine', 'breath of fresh air' and 'silver lining on a cloudy day'.

Noraishall Ali, production operator: Since I do not belong to the 'skilled workers' category, I am always dissatisfied with what I am. I shall always aim for the better. Given an opportunity to become a supervisor, technician, or any other profession that is dominated by men, I will take it up without any hesitation.

Christine Chan, Engineering Department: Women in some countries have shown that they are capable of being prime ministers, lawyers, production and technical supervisors, bus drivers and engineers.

Source: The Fairtimes 1979 (National Library).

Singapore Paper Products 9/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/366158833853452/>

Singapore Paper Products, a local company, was established in 1952 – another one of the ventures born in Singapore during the Korean War.

The founder, Lee Tian Yew, set up the company because a friend who ran a sundry shop had difficulty getting paper to pack his merchandise. Lee was an importer and exporter of paper.

Without protection for local industry and an initial lack of experience, the 1950s were not easy times for SPP. But the company grew, expanded into paints and plastics, and in 1969 became a public listed company.

Singapore Paper Products. Commemorate the Inauguration of our New Building and 20th Anniversary. 1972 (National Library).

Faces of Work 7/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/365386077264061/>

Faces of work at five companies:

Bicycle-making plant, 1967.

Joinery complex at Sembawang Shipyard, 1971.

Who's who at Chartered Industries of Singapore, 1971.

T27S precision engineering department in Rollei Singapore, St. Michael's Estate, 1972.

At an assembly line for electronic components, Ayer Rajah Industrial Estate, 1978.

Sources: Rollei News; EDB and JTC annual reports; Chartered Industries of Singapore bulletin, Sembawang Shipyard newsletter.

Intraco 5/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/256629704806366/>

In 1968, the government formed Intraco, or the International Trading Company, to promote the export of Singapore-made manufactures to other countries.

It was one of three new organisations established that year to take on functions previously held by the Economic Development Board.

The other two were the Development Bank of Singapore (DBS, to finance industries) and Jurong Town Corporation (JTC, to manage industrial estates).

This came after Britain's decision to close its military bases in Singapore sooner than previously stated, which had implications for the economy and for employment, making industrialisation more urgent than before.

In announcing the formation of Intraco, Dr Goh Keng Swee had in mind the 'great Japanese trading companies'.

In 1969, Intraco had established offices or representatives in interesting locations like Moscow, Phnom Penh, Saigon, and Rangoon.

Part of its mandate was to trade with communist countries (including China) on behalf of the Singapore government.

As Goh explained, 'when our private businessmen trade with communist countries, they in fact become agents of communist Governments – true, business agents and not agents in the sinister sense'.

Some of the best traders of Intraco went on to set up their own trading companies in the 1980s.

In 2003, long after the end of the Cold War, the government divested its stake in Intraco. Today Intraco is an investment management firm in Asia.

Photo: MINISTER FOR CULTURE JEK YEUN THONG (RIGHT) WATCHING THE UNLOADING OF THE RICE WHICH ARRIVED FROM THE NORWEGIAN VESSEL HOEGH ORRIS AT JURONG PORT. THE FIFTEEN THOUSAND TONS OF RICE WAS BROUGHT IN BY INTRACO FROM UNITED STATES OF AMERICA ON BEHALF OF THE SINGAPORE GOVERNMENT. 07/11/1973.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/a63af5c5-1162-11e3-83d5-0050568939ad>

Intraco. Annual Report 1969.

Goh tells of Govt plans to speed up economic growth, The Straits Times, 17 April 1968
<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19680417-1.2.72>

Faizal Yahya. Lessons from Intraco, Singapore's original trailblazer. Today. 28 Apr 2015.
<http://www.todayonline.com/singapore/lessons-intraco-singapores-original-trailblazer>

ICI 2/2/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/363363870799615/>

From the colonial era, the Imperial Chemical Industries (ICI) of Malaya.

Established in 1931, ICI's office in Singapore was its first in Southeast Asia.

At the time, it represented the largest chemical manufacturers in Britain, such as Brunner, Mond, Nobels, and Alkali.

In the 1950s, ICI produced two types of chemical products: agricultural (such as fertilisers which were a major focus of the Malaya operation, and pesticides) and industrial (heavy chemicals, paints, plastics, and pharmaceuticals).

The company also had a Technical and General Advisory Department which provided free technical advice on heavy chemicals, dye stuffs, rubber chemicals, paints, water treatment problems, chemical explosives, and plastics.

One of its employees at one time was Lim Yew Hock, Singapore's second Chief Minister.

Source: Imperial Chemical Industries (Malaya), 1930-1955.

Food industries 30/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/362105370925465/>

Some of Singapore's better-known food and food-related industries in the 1960s and 1970s:

Singapore Glass Manufacturers at Alexandra.

Khong Guan Flour in Katong.

Metal Box in Woodlands.

Sugar Industry of Singapore in Jurong.

Photos from ads in the Singapore Food Manufacturer's Association Food Industry directory.

Sports and industry 28/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/361230217679647/>

Sports and industry were closely linked – competition helped keep employees fit while also fostering camaraderie among co-workers. And it was always great to win.

Did you play for your company's sports team? Did you win in the sports tournaments organised by the Pioneer Industries' Employee's Union or other associations?

Source: Pioneer Industries' Employee's Union, 3rd Triennial Delegate's Conference, 1979.

War on evil ogres 26/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/360470624422273/>

Back in 1963, before Singapore joined Malaysia, the government announced that it was declaring 'war on the all too familiar ogres and giants in a subservient society – poverty, disease, ignorance, squalor, and idleness'.

This was 'democratic socialism in action': major economic reforms would develop an industrial economy in Jurong and elsewhere in Singapore, providing jobs and redistributing income, while better public housing, schools, health facilities, and other social services would improve people's standards of living.

The government stated that between 1959 and 1963, companies with a total paid up capital of \$131 million had been set up in Singapore. They included cement, diesel fuel, pharmaceutical products, chocolate products, and chewing gum!

National Iron and Steel Mills was being built in Jurong, using scrap metal from ships being broken down in the shipyards nearby.

Industrial projects were being developed at four industrial estates: Tanglin Halt, Redhill, Bendemeer Road, and Kampong Ampat, and at sites like Pasir Panjang and Bukit Timah, and on offshore islands.

Source: Ministry of Culture, *Democratic Socialism in Action, June 1959-April 1963* (Singapore: Publicity Division, Ministry of Culture, 1963).

Multicultural Jurong 23/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/359221691213833/>

Living in Jurong Town was difficult in the early days (the 1960s): social amenities were few and the town was far from the city where people's relatives and friends lived.

But because of the nature of Jurong as an industrial estate which welcomed multinationals, Singaporeans living in the new flats of Taman Jurong had a uniquely multicultural group of neighbours.

V.K. Balakrishna befriended her neighbours, who were Chinese, Malay, Indian, Japanese, Taiwanese, and Hong Konger.

One of Balakrishna's Singaporean friends, Jessie Thng, moved to Jurong in 1967 and also had Malaysian, Hong Konger, Taiwanese, and Japanese neighbours.

Because it was so quiet in the neighbourhood, Jessie and another neighbour, a teacher from Jurong Primary School, taught their Japanese neighbours English in the evenings.

No place like home in Jurong, *New Nation*, 21 July 1971

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19710721-1.2.49.1>

Metal Box 21/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/358371647965504/>

Metal Box Company, a British multinational and maker of tin cans for food and beverages, initially operated a temporary plant in Johore Bahru in 1947, manufacturing cans mostly for Malaya's pineapple industry.

During the Korean War boom, Metal Box opened a larger factory at 14½th Mile Woodlands Road in 1951. In subsequent years, it expanded the range of cans it produced.

It was one of many foreign companies which faced a wave of labour strikes in 1955.

Write-up on the company:

TIN CANS FOR FRUIT AND FOOD, *The Singapore Free Press*, 29 October 1955

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/freepress19551029-1.2.89.67>

Photo from The Singapore Manufacturer, Vol. 10 No. 1 1986.

Chartered Industries 18/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/357006818101987/>

Operation Doberman was the secret code name for a government project to build a small arms ammunition factory in Singapore in the mid-1960s.

This became Chartered Industries of Singapore, est. 1967, which was:

- the first government-owned company in Jurong industrial estate.
- the first and only company to mint Singapore coins.
- the first and only company to manufacture Singapore-made ammunition.

Photos: pioneer female operators, inspecting Singapore-made bullets in the Small Arms Ammunition Plant in August 1967;

SAR 80 Assault Rifle;

Ultimax 100 5.56 mm Light Machine Gun.

Source: Chartered Industries of Singapore, 15 Years of Progress, 1983.

Flatted Factories 16/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/356224164846919/>

Do you know the different shapes and heights of flatted factories in Singapore?

The first flatted factory was built in 1964 in Tanglin Halt, shaped in an U and 5-storey high.

Subsequent factories came in different shapes and heights: in I, L, Z, T, C, and H shapes and between 3-7 storeys high.

The ideal in terms of cost-effectiveness and functionality? According to a study in 1976, this was the H-shaped factory of 7 storeys – i.e. there was no need to make them lower.

Historically, flatted factories housed light, non-pollutive and increasingly capital-intensive industries located near residential areas, from which they drew their workforce, mostly women.

Most flatted factories were built by the Jurong Town Corporation, rising in number from 5 in 1970 to 40 in 1980.

Only one of the factories was located in Jurong, the others being in established estates like Kallang Basin, Tanjong Rhu, Tanglin Halt, and Redhill, or in new towns like Toa Payoh, Ang Mo Kio, Clementi, and Bedok.

As a tiny city-state, Singapore was unique in building more flatted factories than even Japan and Hong Kong.

Today, the ageing flatted factories may look like relics of the past compared to the modern commercial buildings, but make no mistake, they were an innovative industrial technology in Singapore in their time.

Source: Applied Research Corporation. *A Study of JTC Flatted Factories: Prepared for Jurong Town Corporation*. Consultants: Philip Motha [and others]. Singapore: Applied Research Corporation, 1976.

Photos from JTC Annual Reports.

Ex-Rolleians 14/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/355155381620464/>

More conversations on Rollei a few hours ago, and more photos too.

The ex-Rolleians talked about the days of work when there were no handphones or pagers, playing in the football team of Rollei, meeting old colleagues and remembering those who had passed away.

Most of all it was about how Rollei was such a good experience and a springboard for people's careers.

The first photo of the Rollei factory is so striking. It's not the main factory at Chai Chee.

Now my job is to convince the ex-Rolleians (and others) to speak at the Singapore Heritage Festival!

Photos by Mr H.H. Lim.

Corridor development of Jurong 10/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/353965988406070/>

Interesting case of 'what if' for Singapore.

In 1967, a United Nations team led by Italian planner Gian Carlo Guarda arrived in Singapore to advise the government on the development of Jurong Industrial Estate.

Guarda proposed a Comprehensive Plan very different to the Consolidated Plan that the Planning and Urban Redevelopment Departments had drawn up for Jurong.

The biggest difference was that instead of being a self-contained new town in the west of Singapore, Jurong should follow a 'corridor' approach to development, so that it was connected socially and economically to the city (see maps below).

Guarda argued that the corridor concept was better than the new town one. He pointed out that British new towns were costly and time-consuming to build, and unpopular with residents.

“Self-containment” becomes much too often the euphemism for confinement in a situation in which the most leisurely prospect remains that of fleeing back to the great city along the commuting line’, he wrote.

Interestingly too, Guarda claimed that corridor-based development had advocates among Singapore’s planners.

But Singapore, as we know, retained the British new town concept, modified into a Ring Plan, with a ring of satellite towns in the outlying areas of Singapore connected by a network of expressways.

If you live in a new town, what is your relationship to the city? Do you enjoy residing in the new town, or do you ‘flee back to the great city’ as soon as you can, as Guarda claimed?

Source: Gian Carlo Guarda. Comprehensive Plan for Physical Development of Jurong Industrial District, Singapore. New York: United Nations, 1967.

Old names of Jurong 8/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/353144581821544/>

Malay road names that marked the making of Jurong Industrial Estate in the 1960s, many of them since replaced by English names:

Jalan Buroh (Buruh): labour – retained

Jalan Tukang: craftsman – retained

Jalan Pesawat: plane – retained

Jalan Jentera: machinery – only a small lane remains, most of it renamed Tukang Innovation Drive

Jalan Pabrik: factory – Jurong Pier Road

Jalan Perkakas: tool – Chin Bee Road

Jalan Gudang: warehouse – Jurong Port Road

Jalan Bandaran: municipal/town – Pioneer Road

Maps are from the 1975 Jurong Town Corporation Directory of Industrial Estates, but not all the Malay names could be found there: Jalan Perkakas was already Chin Bee Road and Jalan Gudang has been renamed Jurong Port Road.

Rollei for Singapore Heritage Festival 6/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/352340958568573/>

<https://www.facebook.com/groups/48000673979/permalink/10156092698788980/>

<https://www.facebook.com/groups/183252211695508/permalink/1656417974378917/>

<https://www.facebook.com/chroniclesresearch/posts/312059765955277>

<https://www.facebook.com/lohks/posts/10156933467298222>

Hi everyone, I am putting together a panel of ex-Rollei employees to share their memories for the Singapore Heritage Festival this coming April.

For a company that was around only for a decade in the 1970s, Rollei has surprised me for the strong memories and affection people attach to it.

The sharing is informal, based on personal experience, and will be to a public audience. Some topics we can discuss:

- When and how did you join Rollei?
- What did you do in Rollei, and for how long?
- Who were your colleagues? Do you remember the German management?
- What interesting stories can you recall of working in Rollei?
- How did you feel when Rollei closed down? What did you do upon leaving the company?
- Do you have any historical artefacts – cameras, photos, certificates?

Let me know if you or your parents worked in Rollei and have something to share!

Straits Times feature on Rollei:

<http://www.straitstimes.com/singapore/made-by-rollei-singapore-a-peek-into-history>

Mr Chua and China Woodcraft 5/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/351993118603357/>

I learnt a lot from interviewing Mr Chua, woodcarver and co-founder of China Woodcraft.

He was posted to Baharuddin Vocational Institute to study woodcraft after finishing high school in 1968. He wasn't happy about being unable to continue in the academic stream, but vaguely knew that changes were afoot in Singapore to promote technical and vocational education.

He was briefly an apprentice at Singapore Woodcraft, which was a Hong Kong company; interestingly, his own company, China Woodcraft, was a Singapore establishment.

He learnt more at China Woodcraft than at Baharuddin. His sifu, some of whom were from Shanghai and Wenzhou, were strict. Apprentices were not allowed to touch their tools and had to follow their instructions.

China Woodcraft, which specialised in traditional-style handmade rosewood furniture (no use of nails), came about when Mr Chua and several of his friends began dabbling in wood products, initially as a hobby with no intention to make it a career.

The rosewood came from Burma, routed through Thailand as Burma was then closed to the outside world.

Mr Chua and his friends initially worked out of a makeshift workshop at Adam Road (Bukit Brown), then at Kampong San Teng, before renting flatted factory space in Sin Ming and Ang Mo Kio Industrial Park 3. For a time they had a showroom in Paragon.

Flatted factories were not ideal for rosewood because there was insufficient space to dry out their logs. They were often fined by HDB for putting the logs outside the factory.

They made high-end rosewood products for British, then US, servicemen and expatriates. They later made furniture for cruise ships.

But business became increasingly hard, as they could not find skilled woodworkers (even Malaysians stopped coming). Then rosewood was banned. They changed to teakwood, and they mechanised part of the production.

Mr Chua's favourite carvings are of dragons. He also carved the Merlion on furniture (see one of the photos)!

I had expected to hear about the development of a business and industry. But I also found out how his life changed because of national policy – promoting technical and vocational education in the late 1960s.

Mr Chua was also not just an industrialist, but also an artist who cared about his craft and work.

It's a rather sad story of an industry that would not last much longer than the 40 odd years it's quite serendipitously come about from Singapore's industrialisation. But as Mr Chua mused at the end of the interview, change is inevitable.

The Pioneer Certificate 3/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/351031762032826/>

Food for thought for our commemoration of 1819.

The Pioneer Industries (Relief from Income Tax) Bill, one of the pillars of Singapore's industrialisation, was introduced in the Legislative Assembly in late 1958.

Governor William Goode had previously highlighted the need for legislation to provide companies with incentives to make capital investment in industry.

In a Legislative Assembly debate on the Bill in December, Lee Kuan Yew, then an opposition MP, questioned not the legislation, but whether the Singapore People's Alliance government would provide the right leadership for industrialisation.

The Bill was approved in January the following year and came into force in April.

A month later, at the end of May 1959, as we all know, Singapore became a self-governing state and the PAP swept to power after the general elections.

The Pioneer Certificate, which gave new companies tax relief for five years, was an important instrument in the EDB's efforts to persuade manufacturing companies, especially multinationals, to set up in Singapore in the 1960s and 1970s.

Certificate No. 1 went to Shell in September 1959 to establish an oil refinery on Pulau Bukom.

No. 2 was another petroleum company – British Petroleum.

INDUSTRIAL EXPANSION (RELIEF FROM INCOME TAX) BILL

Sitting Date: 04-12-1958 , Vol: 8 , Start Col: 1134 , End Col: 1134 , Relevance: 27%

<https://sprs.parl.gov.sg/search/report.jsp?currentPubID=00068942-ZZ>

Food industries 1/1/2018

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/350332395436096/>

The food industry – one of the earliest industries in Singapore.

Happy new year to all!

Singapore Food Manufacturer's Association. Food Industry in the Republic of Singapore. 1974.

Memories of Singapore Pioneer Mariners Project 29/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/349240832211919/>

Very happy to know of the Memories of Singapore Pioneer Mariners Project, led by Mr Cheng Huang Leng, former Head of the Marine Engineering Department from 1978 to 1981 at the Singapore Polytechnic.

Its aim is to leave 'a legacy for the next generation of mariners' (and I would say for all Singaporeans too).

Here is an interesting nugget of history from one of the contributors, Yin Kum Wai, who was an apprentice at PSA/Keppel between 1968-1973:

'In those days, different trades were having majority by race or dialect group. In Tanjong Pagar yard, welders were mainly Malays. Generally in Keppel, welders were mostly Hokiens, steelworkers/'platers' were mostly Cantonese (particularly the sub-Cantonese dialect, 'Sze-Yup'), machine shop & fitting section were Hainanese & Cantonese.

Some were father & sons, uncles & nephews. The practice of bringing/introducing relatives and sons into Keppel was common. In fact, Keppel encouraged that (quoting 'It goes in the Blood'). It was common to see many with same surnames. Very likely, they were related.'

Memories (2010-2015) is a project of SNAMEs, the Society of Naval Architects and Marine Engineers in Singapore. I hope they continue writing.

Memories of Singapore Pioneer Mariners,
<http://www.snames.org.sg/Memories%20of%20Mariners.html>

Mdm Png and long sai 27/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/348332862302716/>

Mdm Png, a long sai ('alongside'/ship cleaner):

I couldn't find work so I asked someone to help me find work. I had to support so many children. Or else my children would have starved to death.

Do you know when I started smoking? Do you know what 'long sai' is? It was tough working on a ship, scraping off the rust. Sometimes the rust got into your eyes. And the salt water, if your skin was broken, it really stung you. Your skin might rot.

You had to work every day before the ship left. It took several days to clean, not just one day, since it was so big.

Sometimes you had to clean the oil so my body got covered in black oil. That was terrible. I had to bring clothes there to change, or else how could I come home? Very few people bathed there, because everyone was rushing home to see their children after work.

I earned \$2.80 a day working as a long sai. Initially it was \$1.80 then the pay increased. I have done all kinds of terrible work. My life has been bad for so long.

I did not smoke previously. Only when I was working as a long sai, the ah soh [aunties] there would sit together to have coffee and smoke. Everyone of them smoked. So I picked up smoking from them.

All of them were Cantonese women. I learnt a bit of Cantonese from them. I worked as a long sai for decades, when my children were very young.

I was 30 plus then, I am 85 years old now.

I have done all kinds of work, except as an undertaker. I carried wood and planks. I also worked in a metal factory, carrying pieces of metal.

You can work but cannot stop working [ay sai jo, buay sai heo].

My interview with Mdm Png in 2008. I still remember listening to her in her living room. We took a picture together, and it was raining heavily outside when I left.

Mr Lai and Sembawang 26/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/347635019039167/>

One of the many poignant stories on the British military withdrawal from Singapore in the late 1960s and its impact on local workers in the bases, as told to me by Mr Lai in 2010.

His family lived in Blk 14 Rm 8, Kowloon Road in the Naval Base before the pullout. His father was a fitter in the dockyard.

Lai decided not to finish secondary school but joined the second last batch of apprentices at the dockyard. It was a culture shock meeting the other apprentices and workers: 'all the streetwise, cynical people', 'rough men', 'real rascals'.

When the British left, he worked briefly as a fitter in Sembawang Shipyard but did not stay long and eventually ended up in construction.

The real impact for him and his mother was moving out of the Naval Base into public housing – first into a JTC flat in Sembawang and then an HDB flat in Toa Payoh.

The Naval Base was a paradise for them; they could get a light bulb changed for free. They were shocked that they had to pay for utilities in public housing, and sad that they could no longer live on the ground.

‘Biggest upheaval is the housing’, he said of the British rundown.

Plan of HM Naval Base 2nd edition 1968, showing Kowloon Road and other roads where the Asian base workers lived.

Guinness 22/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/346033742532628/>

Interesting beer story from Lee Kuan Yew’s memoirs about our common market troubles when Singapore was part of Malaysia:

‘Guinness had already paid a deposit for a site in Jurong for a brewery when Tan Siew Sin, the Malaysian finance minister, told Alan Lennox-Boyd, the Guinness chairman, that he would not allow even one bottle of stout to be imported. So Lennox-Boyd set up his brewery in Kuala Lumpur and offered to allow us to forfeit his deposit. We returned it. Years later we repaid Tan Siew Sin's compliment when we refused to reduce the import duty on stout from Malaysia. Guinness settled on a Singapore brewery to produce it for them under license’.
– Lee Kuan Yew, From Third World to First (2000).

Incidentally Alan Lennox-Boyd was Secretary of State for the Colonies, overseeing the decolonisation of Malaya and Singapore in the 1950s. In 1959, he left politics to join Guinness.

Photo credit: The Straits Times, 29 August 1964

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19640829-1.2.76.1>

Indiana explosion 20/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/345236842612318/>

Another sad day at Sembawang Shipyard on 27 November 1992 when a fire and explosion killed 8 workers (all Malaysians) and injured 14 others onboard the Indiana, an Ultra Large Crude Carrier carrying Iranian heavy and light crude oil.

This happened, the Committee of Inquiry noted, a mere 143 days after the fire and explosion onboard the Mt Stolt Spur in July 1992, suggesting that lessons from the earlier accident had not been learned.

The fire on Indiana was caused by hot work on the deck, and the heat led the sludge in the oil tank below to vapourise into a flammable gas mixture after 20 minutes.

Something as small as sludge, and yet deadly. The shipyard's officers had failed to properly inspect the tanks for sludge and remove it.

Stay safe and vigilant onboard the ships.

Source: Singapore. *Report on the Fire on Board Indiana on 27 November 1992 at Sembawang Shipyard by the Committee of Inquiry*. Singapore: Subordinate Courts, 1993.

Jurong Hill 18/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/344595802676422/>

Two different moments in our history (and in world history) atop Jurong Hill with Britain and China.

1969, Princess Alexandra plants the first tree in the Garden of Fame.

Britain had announced the year before that it would be closing its military bases in Singapore by March 1971 instead of the end of 1976.

Britain would work closely with the government to ensure the withdrawal did not affect security and business confidence in Singapore.

1978, the final tree on the hill is planted by Deng Xiaoping as the Garden is closed.

Deng's China had emerged from terrible political and ideological strife to adopt the Chinese way to socialism and open up to international trade.

There was very little publicity on his visit to Singapore, but he was reportedly impressed with the growth and management of the city-state and the two countries signed a trade agreement the following year.

A total of 28 trees were planted on Jurong Hill (a new garden was built beside the Jurong Town Hall).

In the official reports, the hill is listed as a social amenity; in reality, it is a marker, and maker, of Singapore's diplomatic and economic history.

Photos from JTC annual reports.

Rollei 16/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/343583186111017/>

The end of Rollei – what a great find from the National Library, but such a sad one too.

Korean War 14/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/342827032853299/>

The terrible Korean War of 1950-53, which killed over 4 million people, helped expand Singapore's fledgling manufacturing industry.

The increased demand for raw materials, especially rubber, also spurred a brief boom for the entrepot trade.

In 1950, new factories producing glass, electrical batteries, metal boxes, and assembling air-conditioners were set up.

Two years later, a textile mill and edible oil production factory were established, while a canning business expanded its range of products.

The canning company was Amoy Canning, which opened a Green Spot factory in collaboration with the US company in 1952, as well as a sauce factory, both in Bukit Timah.

In 1953, boot polish and rope factories were also formed.

One of the local businessmen who benefitted from the Korean War rubber boom was Tan Lark Sye, who soon went on to found Nanyang University in 1956.

BUKIT PANJANG GOVERNMENT SCHOOL - PUPILS IN FRONT OF GREEN SPOT FACTORY. 1953

<http://www.nas.gov.sg/archivesonline/photographs/record-details/b2143f12-1161-11e3-83d5-0050568939ad>

Handicapped workers 12/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/342025356266800/>

Very nice story on the handicapped workers employed by Selangor Pewter and other factories in the 1970s – the people who 'talk' with their fingers.

As they insist, handicapped workers are as productive as able-bodied workers.

‘We spend far less time chatting with each other because quite a few of us here are deaf and dumb. We do little else but work, work and work’.

Pioneer Industries Employees’ Union & Singapore Industrial Labour Organisation. Labour News. July 1976.

Jurong Sports Complex 10/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/341413289661340/>

In our photo-documentation of Jurong, we went to the old Jurong Stadium at Corporation Road, now locked up and silent.

It was built in 1975 and had a capacity for 6,000 people. It was used for the National Day Parade and several SAF passing-out parades that year.

The stadium was part of Jurong Sports Complex built in the early 1970s as part of a hive of activity when the Jurong Town Corporation further developed the social amenities of Jurong.

Healthy bodies for a strong nation (and economy).

Besides the stadium, the sports complex consisted of a swimming pool (now converted into a futsal pitch) and tennis courts. In 1971, nearly a hundred thousand people swam in the pool, which doubled in the next few years.

Along Jalan Ahmad Ibrahim there were also a football pitch and courts for basketball, volleyball and sepak takraw.

National Iron and Steel Mills 8/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/340481976421138/>

National Iron and Steel Mills was the first major industrial establishment of Jurong Industrial Estate (although smaller industrial firms had existed in Jurong earlier). It was formed in 1961 and received Pioneer status the following year.

The idea of an iron and steel mill built in Jurong originated in the 1958 Master Plan. But this remained a paper plan.

In 1960, a year after taking office, the PAP government announced that an iron and steel mill would be built in Jurong, forming the core of a swathe of medium and heavy industry, which would also contain oil refining, shipbuilding and shipbreaking, sawmilling, and textiles.

At the time, the government was advised by an UN team of experts headed by French industrialist P.L. Schereschewsky. The team recommended that the iron and steel mill be

developed in three phases: first, a mill for processing scrap, followed by an integrated steel mill and a large blast furnace.

National Iron and Steel was funded mainly by local investors, with a minority contribution from the EDB.

The mill aimed to manufacture iron and steel products for the construction industry in Singapore and the region. Commercial production began in 1964.

In 1990, the company was renamed NatSteel. It still stands, expanded, at its original site at Jalan Besi Baja, now Tanjong Kling Road, which we visited a few weeks ago.

Old photos from OD 39/87 Expansion of Iron and Steel, c. mid-1960s.

Rollei & Mr Chong 6/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/339661713169831/>

We took some photos of Mr Chong Nam Soy's old Rollei camera and uniform before he donates them to the National Museum.

Mr Chong, from the first batch of production technicians sent for training in Germany in 1971, returned to set up a production line for shutters in the Rollei factory at Chai Chee.

He left Rollei in 1977 to join the German-Singapore Institute, then the Brown Boveri-Government Training Centre, both as a lecturer.

Mr Chong was featured in the Straits Times story on Singapore's industrial heritage on 20 November.

Do you have old artefacts, certificates and letters of Singapore's industrialisation to share?

Straits Times feature on Rollei:

<http://www.straitstimes.com/singapore/made-by-rollei-singapore-a-peek-into-history>

Acma 4/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/338842956585040/>

We were surprised to find today that the Acma factory still stands at 17 Jurong Port Road (previously Jalan Gudang) as it did in the 1975 JTC industrial directory.

How did it survive and what is it making now?

Acma Electrical Industries, which made refrigerators, electric fans and air-conditioners, was incorporated in 1965 as a pioneer industry. It was opened two years later by Minister for Finance Lim Kim San.

Acma was a joint venture between the EDB, Chung Hsin Electric, Machinery Manufacturing Corporation of Taiwan, and local businessmen.

Today Acma makes fuel saving products and technologies.

This, in a nutshell, is the industrial history of Singapore – always adapting and changing (sometimes disappearing).

Sources:

OPENING OF FACTORY OF ACMA ELECTRICAL INDUSTRIES LTD AT JURONG

Covering Date: 03/08/1967

<http://www.nas.gov.sg/archivesonline/photographs/record-details/cb6d5c85-1161-11e3-83d5-0050568939ad>

Factory opening. The Straits Times, 2 August 1967:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19670802-1.2.113.8>

ACMA corporate page: <https://www.acmaltd.com/about>

Japanese management techniques 2/12/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/338179586651377/>

Japan played an important role in Singapore's industrialisation in the 1960s and 1970s. A Japanese team of engineers and managers advised the government on the development of Jurong Industrial Estate while there were various Japanese industries, light and heavy, that set up here.

Singapore also tried to learn from Japan's work culture and management techniques, seen as an important factor behind its economic success.

Lai Park On was Deputy President at Mitsubishi-Singapore Heavy Industry, a joint venture shipyard in Jurong, formed in 1973.

Lai, who speaks Japanese fluently, tried to introduce Japanese productivity ideas such as TQC (Total Quality Control), Quality Circles and morning exercises.

But he was not always successful, as experienced local supervisors and foremen, who were used to customary practices, would tell him in Cantonese: 'Mr Lai, are you stupid? You are asking us drawing lower pay to implement all these new ideas?'

National Productivity Board. An invitation to attend 1st Singapore National Quality Control Circle Convention. Quality Control Circle Convention. Covering Date: 1982
<http://www.nas.gov.sg/archivesonline/posters/record-details/305667b5-115c-11e3-83d5-0050568939ad>

QC idea involves everyone. The Straits Times, 22 March 1982, Page 14
<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19820322-1.2.65>

Population growth 28/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/336660523469950/>

The main reason why Singapore pursued rapid industrialisation after the Second World War was not that the existing economy, based on the entrepot trade, was doing badly.

It was rather the high population growth rate, as increasingly people settled down in Singapore instead of returning to their home countries.

In the 1930s, more Chinese women entered Singapore and formed families. Just before war broke out, the Deputy Controller of Chinese Labour reported ‘swarms of Chinese children in their teens, mostly local born, and still more who have not yet reached their teens’.

This trend increased near the end of the Japanese Occupation, when multiple children were born, who became known as the postwar ‘baby boomers’.

In 1961, Singapore had a population of 1.6 million. The growth rate between 1947 and 1957 was 4.5% per annum – the highest in the world – while the size of a nuclear family was 5.4 persons in 1957 and 5.6 in 1970.

Goh Keng Swee’s study of low-income households in 1956 found that a fifth of the households lived in poverty, with a monthly income under the minimum of \$102.

High population growth created impending problems of employment and dependency. Under the entrepot economy, many of the growing children and teens would likely be unemployed or underemployed. Furthermore the entrepot trade was unlikely to grow. A youthful two thirds of the population would have to rely on the work of a third.

Labour-intensive industries, on the other hand, would absorb many more people. The aim of the State of Singapore Development Plan for 1961-1964 was to increase the number of jobs for young people entering the workforce each year.

Photos by Wong Pok Hee and Ivan Polunin.

Toa Payoh and Fairchild 26/11/ 2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/335922333543769/>

A map of Toa Payoh's industries in the 1970s, from FT Liu's book on Fairchild Singapore, a major American semiconductor factory established in the new town in 1969.

Another notable factory in Toa Payoh was that of the Dutch maker of TVs and audio equipment, Philips.

Fairchild, Philips and other factories in Toa Payoh recruited their workers from the 150,000 residents of the new town.

Sources:

Liu, Fook Tim. *The Fairchild Singapore Plant 1969-1987: The Story of a Pioneer Semiconductor Assembly and Test Factory and its Former Employees*. Singapore, 2016.

JTC Annual Report 1973.

National Archives of Singapore. STAFF PARTICIPATES IN "SING SINGAPORE" 1988 AT PHILIPS (SINGAPORE) PTE LTD. Covering Date: 30/03/1988

<http://www.nas.gov.sg/archivesonline/photographs/record-details/ff386667-1161-11e3-83d5-0050568939ad>

Sungei Kadut 24/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/335172706952065/>

The move of sawmills from the city to the newly built Sungei Kadut industrial estate in Kranji in the mid-1970s was the largest relocation of industries in Singapore's history.

Part of the reason for the shift was environmental, as the work of the sawmills tended to cause noise and air pollution.

This coincided with the rising official concern over pollution and other environmental issues in the 1970s.

The relocation involved agencies such as the Anti-Pollution Unit, Jurong Town Corporation and Economic Development Board.

Following representations to the government, the millers received concessions for rentals and the use of timber for the mills.

The timber industry faced a difficult time in the 1970s, with uncertain demand and supply (of logs from Malaysia and Indonesia).

In 1979, 14,000 workers were employed in the timber industry (6% of the manufacturing workforce).

Sungei Kadut was one of several smaller, specialised industrial estates located outside of Jurong that were planned during the 1970s.

There were also Loyang (in Changi, for aerospace and marine industries, and oil exploration), Senoko (Woodlands, marine and food industries), Ayer Rajah (various flatted factories and industrial workshops), and the 'Southern' group of islands (petrochemicals).

Some of the land, such as Senoko and Ayer Rajah, were formerly British military sites transferred to the Singapore government in the early 1970s.

Photo from 1978 JTC Annual Report.

Opium factory 22/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/334429727026363/>

Opium plant in Singapore after World War Two (presumably the government-run packing plant at Pasir Panjang – aka Bukit Chandu where the battle with the Japanese took place – while there was also an opium-processing factory at Telok Blangah).

Photos from the Harrison Forman Collection at the University of Wisconsin, Milwaukee.
<http://collections.lib.uwm.edu/digital/collection/agsphoto/id/30389/rec/2>

THE STORY OF CHANDU. The Straits Times, 22 July 1935:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19350722-1.2.140>

Rollei@Benoi Road 20/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/333606617108674/>

Thanks to the Power Grid sign, which helpfully marks the spot where the Rollei plant at 34 Benoi Road used to stand in the 1970s and early 1980s.

The premises are now occupied by another factory.

Similar signs mark the location of some other old factories which no longer exist, and we eagerly looked out for them in our photo-documentation of Jurong's industries yesterday.

Besides the main factory at Chai Chee, Rollei had smaller factories at Benoi, Alexandra Road, Kallang Place, and Indus Road.

Wong Choo Kee and Bukom 18/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/332855653850437/>

‘Almost like a utopia’, ‘almost a complete city by itself, ‘so much freedom’.

This was how Mr Wong Choo Kee described growing up on Pulau Bukom before the Second World War. He was born in 1924 and is 93 this year.

His father worked as a clerk with Shell on Bukom. All employees were provided housing on the island but there was a social hierarchy with Europeans at the top, followed by the clerical grades and then the coolies.

In the northern part of Bukom, inside a fenced area, stood the Shell secretariat office and the fuel and storage tanks, guarded by a 24-hour Gurkha contingent.

To the south was a commercial area, with shoemakers, bakers, restaurants, a Robinsons outlet, and an opium shop (patronised by coolies after their day of labour hauling kerosene tins).

The area also offered periodic entertainment such as Chinese wayang, wayang kulit and Malay ronggeng.

There was an outdoor cinema which screened the latest films during weekends, and a nightclub at the top of a hill for Europeans and Eurasians.

The children took a ferry to school in Singapore. Wong attended grades 3-5 at Outram School and then 6-7 at Raffles Institution, where he was a Boy Scout.

Before the war, air raid shelters were built on Bukom and drills were carried out for gas attacks.

When the Japanese attacked, Wong’s family fled to nearby Bukom Kechil, watching Japanese planes bomb Singapore.

The British set Bukom’s oil tanks on fire as part of a scorched earth policy, and the oil tanks burned like candlesticks.

Wong saw corpses of British and Australian soldiers floating in the sea.

MOHAMED BIN MUSTAFA (LEFT) AND RAHIM BIN NASIR (RIGHT), BOTH 12 YEARS OLD, COULD NOT GET AWAY FROM THE COCONUTS ON A HOT DAY AT PULAU BUKOM. Covering Date: 01/06/1950

<http://www.nas.gov.sg/archivesonline/photographs/record-details/62ec0392-1162-11e3-83d5-0050568939ad>

Engineers 16/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/332060963929906/>

An interesting book on the pioneer engineering graduates of Nanyang Technological Institute's Class of 1985.

In short chapters, it tells how engineers have contributed to many fields of Singapore's development, such as industry, public utilities, the military, and recent mega-projects such as Marina Bay Sands.

Engineers built, rebuilt and reclaimed the environment to enable Singapore to escape (to some extent) its physical constraints.

I like the chapters on semiconductors, which were a big industry with major companies like Fairchild, Texas Instruments and National Semiconductor.

Engineers designed programmes to test semiconductor chips and durable packaging for the products, and in the long run a corps of experienced Singaporean engineers developed.

There are several chapters on the now troubled MRT system. We can compare the hopes and efforts of engineers in the conception and early years of the rail network to present day difficulties.

The conclusion of the book also makes for sobering reading: how Singaporeans are shunning or leaving engineering as a subject of learning and vocation, how current engineers are overworked, and how they are not recognised for their efforts and contributions.

Liu Fook Thim. *Thirty Years Hundred Stories: Engineering Accomplishments in Singapore as Told by the NTI Pioneer Engineering Class of 85*. Singapore: Nanyang Technological University/ISEAS – Yusof Ishak Institute, 2015.

<https://bookshop.iseas.edu.sg/publication/2107>

First drive in cinema in Jurong 14/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/331302727339063/>

Singapore's first drive-in cinema was built in Jurong Town in 1971. The cinema was the result of a new drive to build social amenities since 1968, when Jurong Town Corporation was formed.

By 1975, Jurong had a school, hawker centre, crèche, swimming pool, large parks (Jurong Park and Jurong Hill), the Bird Park, the Chinese and Japanese Gardens, a sports stadium, and a golf course.

JTC's goal was to make Jurong a 'clean and green', self-contained 'Garden Industrial Town' (1975 JTC Annual Report).

Gradually the proportion of Jurong's workers living in the town increased.

The drive-in cinema was managed by Cathay Organisation and was reportedly well patronised. One of its first shows was the Hammer film, *Creatures the World Forgot*.

Previously, there was an open air cinema in Jurong but it was unpopular because it showed older films which were also often meant for children.

Subsequently another, air-conditioned cinema, run by Shaw, was built in Jurong.

Photo of the drive-in cinema (foreground) from 1971 JTC Annual Report.

Stolt explosion 12/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/330626884073314/>

The early 1990s were dark years for Sembawang Shipyard, rocked by 3 serious explosions onboard ships – on the *Stolt*, *Indiana* and *Bethehem*.

The first of these disasters at Mt Stolt Spur, a Liberian registered chemical tanker which arrived at the shipyard for maintenance in July 1992, killed 6 people (3 Singaporeans and 3 Indian nationals) and injured 61 others.

The cause of the explosion was likely due to hot work (a welder's use of a gas torch) during the chemical cleaning at the vertical port boiler, coming into contact with flammable liquid escaping from a leak from the exhaust gas boiler below.

The explosion caused a fire that 'raged for 20 minutes' and 'raged towards the skylight'.

A Committee of Inquiry, led by senior district judge Richard Magnus, found several parties culpable: 1) Sembawang Shipyard and its safety staff for failure to adhere to safety procedures in the hazardous work of chemical cleaning, and the shipyard for failure to hire a competent cleaning subcontractor, and 2) the subcontractor for conducting hot work during the cleaning.

The detailed report of the COI makes for harrowing reading. Two things jumped at me: one being how the good work on safety after the 1979 *Spyros* disaster had deteriorated into complacency – some safety officers now regarded the permit-to-work system as a 'matter of formality which demanded compliance and nothing more'.

The other thing was the testimonials of the survivors and victims. It is clear that, over and above the specific causes of the explosion, competition in the ship cleaning industry was

intense. To 'rush up the job' and 'commit to the schedule' were a 'normal routine', and as it turned out, an unsafe one.

Source: Singapore. Committee of Inquiry into the Fire on Board Mt Stolt Spur. *Report on the Fire on Board Mt Stolt Spur on 12 July 1992 [at Sembawang Shipyard]*. Singapore: Subordinate Courts, 1992.

Low cost and executive flats 10/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/329812517488084/>

Can you recognise the low-cost housing and executive flats of Jurong Town?

In the 1970s Jurong Town Corporation began to develop the Jurong Industrial Estate into a 'self-contained garden industrial town' (JTC 1972 Annual Report).

Most of the early housing built by JTC were low-cost 1-, 2- and 3-room rental flats for workers. Very quickly, these flats reached full occupancy – a contrast to the 1960s when most workers travelled to work in Jurong and were reluctant to live there.

JTC also built flats in Sembawang which was being redeveloped into an industrial town (at the former naval base and Senoko industrial estate) following the British military pullout.

In 1975, JTC began to sell its flats under the homeownership scheme, partly to instil a sense of community in Jurong and partly to relieve traffic congestion along the main roads into the town.

The JTC also built executive or 'luxury' flats for industrialists and top executives and management, which were located near Jurong Lake and the Chinese and Japanese Gardens. Jurong also had a country club and a golf course.

Photos from JTC Annual Report 1976.

Lai Park On and Semco 8/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/329128797556456/>

Do you know that Semco (Sembawang Salvage Company) was involved in often hazardous salvage operations in the Persian Gulf during the Iran-Iraq War in the 1980s?

I recently interviewed Lai Park On, who was in charge of technical personnel at Keppel and Sembawang shipyards and at Mitsubishi Singapore Heavy Industries.

Among Mr Lai's many interesting stories was the 'lucrative' business of Semco, which was jointly set up by him when he was Managing Director of Sembawang Maritime and CN Watson, Sembawang group's chief executive, in 1986.

They bought over Selco, an older salvage company based in Singapore, which had been the second largest salvage company in the world, and renamed it Semco.

Initially Semco's interest was the China market, but they soon turned their attention to the Middle East and the high price of oil.

At its height, Semco had 10 salvage vessels and a hundred men stationed in the Gulf.

As Mr Lai related, Semco's tugboats would trail oil tankers leaving the Persian Gulf in order to be the first to mount rescue operations when they were hit – rescue here meaning the crew and more importantly the oil onboard.

This was risky because of the ongoing conflict.

In September 1986, the Semco tugboat Salvatore was struck by a missile fired allegedly by an Iranian gunboat in the Gulf.

With the end of the Iran-Iraq War in 1988, Semco reduced its operations in the Persian Gulf.

Semco tugboat Salvanguard (photo credits to Mac Mackey):

<http://4.bp.blogspot.com/>

L1R2XQnGofA/UK1c1aKfGaI/AAAAAAAK_w/YPURq2zYXgw/s1600/9775-+24+Salvanguard.jpg

Semco salvage tug sunk in Persian Gulf, BUSINESS TIMES, 18 September 1986:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/biztimes19860918-1.2.5>

Flatted factories 6/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/328352284300774/>

Flatted factories of different shapes and sizes. JTC Annual Report 1970.

Japanese survey team 5/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/328000757669260/>

This is an interesting turn in the research. I have been looking for a survey in 1960 of Jurong Industrial Estate by a Japanese team of experts commissioned by the Singapore government (the 'Yanagisawa report'). I haven't found it but nestled within a British colonial file (CO 1030/1176 Jurong Industrial Estate Project, Singapore) is an English translation of an early version of the Yanagisawa report. This translation was reportedly 'obtained in confidence from an "undisclosed but reliable source"'.

The Japanese team, which comprised of 6 members, was in Singapore for 2 months and met with the UN team also in Singapore at the time (the team of Albert Winsemius).

Here are some insights from the Japanese report:

- Of Singapore's industrialisation programme, the Japanese team felt that 'the possibility of success is very high', given the enthusiasm and determination of the government, which has 'in readiness a considerable amount of capital and such thing as development funds in readiness to help industries has not been observed in other South East Asian Countries'.
- Unlike the UN team, which allegedly focused on light industry, the Japanese team believed that Singapore should develop heavy industry from the start. Winsemius did

submit detailed recommendations for the shipbuilding/repair, metal and engineering, electrical, and chemical industries, although its immediate focus was on a crash programme to create jobs and deal with unemployment. Both the Japanese and Winsemius reports held that Singapore's industrialisation would succeed.

- The Japanese assessed the development of Japanese industry in Singapore to be viable, given recent signs that the Singapore government was supporting non-British foreign industry. It felt that the government was 'pro-Japanese' and by using Singapore as a foothold, Japanese industry could expand to the rest of Southeast Asia. The government's decision to seek advice from a Japanese team of experts was bold, given the strength of anti-Japanese sentiments because of the war, especially among the Chinese community.
- Heavy industry would succeed in Singapore, but the government may consider light industry first or a small number of heavy industries to start with. Detailed planning is paramount but plans should also be flexible and subject to revisions (This was similar to Winsemius' approach).
- The coastal area of Jurong is similar to those in Japan, making it logical to mirror the industrial development on the latter. The Jurong waterfront is suitable for an industrial estate and specifically heavy industry, while its harbour is suitable for port facilities to transport heavy industrial goods by sea.
- A new civic centre may be built west of Jurong Road, for a new town with an estimated population of 180-200,000 (half of which would be employees of the industrial estate).
- Landuse would be zoned, with the biggest areas allotted to industry and housing, but with provisions for shopping, public service and green parks. Jurong should have an agricultural area which would supply its food. Land reclamation, by levelling the hills, would be necessary.
- Jurong new town would be organised into 2 districts: east (Loyang) and west (Samulun). The main access road to the city would run from east to west, while 5 major roads running north-south would connect the civic centre to other parts of the estate.
- Just as Winsemius drew upon his industrial experience in the Netherlands, so the Japanese envisioned the development of Jurong along Japanese lines.

Here is a map of the planned development of Jurong.

Meanwhile the search for the Yanagisawa report continues.

Industrial buildings 2/11/2017

<https://www.facebook.com/groups/183252211695508/permalink/1593709187316463/>

Perhaps there is a lesson in environmental sustainability to be learnt from Australia by adapting old industrial buildings to new uses, instead of demolishing them?

https://www.theguardian.com/sustainable-business/architecture-design-blog/2016/oct/13/preserving-historical-buildings-the-most-sustainable-thing-is-not-to-build-new-stuff?CMP=Share_AndroidApp_Tweet

Islands of Singapore 1/11/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/326543194481683/>

Much of Singapore's industrialisation took place away from the main island. The earliest example of this is Pulau Bukom where Shell originally built an oil depot in the 1880s, which expanded in the 1960s to an oil refinery and oil refinery complex (which in 1971 was the second largest in Asia).

Likewise Esso set up an oil refinery at Pulau Ayer Chawan as Singapore's petroleum industry grew in the 1960s and 1970s.

Then there was Pulau Semulun, which was used for shipbuilding and repair and had a bridge connecting it to Jurong. Its inhabitants were relocated to another island, Pulau Ayer Merlimau, but this was subsequently redeveloped for a third oil refinery.

Many of these islands were enlarged through land reclamation.

Pulau Damar Laut, located near the mouth of Jurong River, was connected by a bridge to the wharves and growing trade of Jurong.

Three major islands did not go the industry route: Pulau Blakang Mati (now Sentosa) was slated for recreation (it was the intended site for Esso's oil refinery but the government changed its mind), Pulau Ubin (farming and quarrying) and Pulau Tekong (farming and military training).

The extensive use of the offshore islands for industrial purposes highlights the lack of land on the mainland.

In 1971, Singapore had 62 offshore islands accounting for 6.3% of its total land area.

Source: Straits Times Annual 1971.

Jurong Port 30/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/325784247890911/>

The 10,000 ton President Van Buren was the first ship to dock at Jurong Port in 1965. It arrived from Saigon to unload timber.

Jurong Port (or JP) was set up in 1963 and began operations two years later, the year Singapore became independent.

Unlike the port of Singapore, JP was more of an 'industrial harbour', handling raw materials and manufactured products and serving the factories of Jurong Industrial Estate.

Both ports had the advantage of a deep water harbour.

JP had only 2 berths in the beginning but added further berths and storage facilities in the 1970s as industrial production in Jurong picked up.

Source: Jurong Port. Jurong Port at 50: Contributing to Singapore's Progress. 2015.

Flexi 28/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/325062301296439/>

This is an interesting article that shows that flexible work arrangements existed earlier in Singapore.

'Rubber work', as Aunty Mee in the article called it and as practised at Hewlett Packard in the 1970s and 1980s.

The HP newspaper ad from 1979 below lists flexible work hours as one of the benefits the company offered. Staff can go to work in the morning within a window of 2 hours.

But the frequent decision of women quitting when they had children suggests flexi work was not common, or effective. In 1989, most employers had still not adopted the measure.

<http://www.workwise.sg/what-is-a-positive-workplace/171005-walking-a-tight-rope>

Ad: <http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19790803-1.2.85.2>

Flexi-time is linked to workers' morale and quality of life

The Straits Times, 8 November 1989, Page 2

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19891108-1.2.104.3.1>

Siew Gek II 26/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/324240774711925/>

We return to Siew Gek, the determined and enterprising woman who was working in an electronics factory (HP) and had bought an Acma fridge, eight years later in 1981.

By this time, she had been promoted to Grade C, the highest pay grade for a worker, earning over \$500 a month including overtime.

Her job on the production line, she proudly explains, is to glue the electronic parts. In local lingo, she has become an 'old girl' whom the younger workers call 'auntie'.

With her and her husband's earnings, Siew Gek's family was able to move out of their one-room flat into a 2-room apartment they had bought from the HDB.

They renovated and furnished the house, erecting an ancestral altar in the hallway and cabinets in the kitchen, as well as buying a sofa, washing machine and a Pyrex oven.

Her husband, family and in-laws have by now also accepted her working at the factory.

Siew Gek took a keen interest in her children's education, trying to make sure they enrolled in good schools and did well in their studies.

'I'm not exactly sure what the best jobs for my children will be, but I hope they won't have to take the kind of jobs their father and I have'.

Pyrex oven glassware:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19630406-1.2.164.3>

From: Janet W. Salaff, *State and Family in Singapore. Restructuring a Developing Society*. Ithaca: Cornell University Press, 1988.

Komatsu 23/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/323166194819383/>

Komatsu now and then – the 'bulldozer' of Singapore in the 1970s, and several weeks ago when we visited its former factory site at 1 Gul Avenue in Jurong.

The Komatsu D125A Bulldozer was hailed as a low-cost, power-packed and durable machine. It would have played a big role in land, housing and industrial development in Singapore (and Malaysia).

Komatsu (Singapore) was a Japanese heavy equipment company that made bulldozers, tractors, forklifts, and excavators.

It was established in 1971 as a spare parts distribution depot before expanding into a regional headquarters for the Southeast Asian market.

The area of Gul Avenue housed other many medium-sized industries like Komatsu, such as General Electric (GE), Bridgestone, Philips, Nissan Motors, and Union Carbide.

To the north of Gul Avenue were the light industries (Singapore Textiles, Beecham, Sanyo, Ford Motors), and to the south the large shipyards (Jurong, Hitachi Zosen, Marathon, Mitsubishi).

Picture from Straits Times Annual 1970.

BRIEFING BY MR TEH CHEANG WAN, CHAIRMAN (JURONG TOWN CORPORATION) FOR VISIT OF H E PRIME MINISTER MR TAKEO FUKUDA TO JURONG TOWN ON MONDAY, 15TH AUGUST 1977 AT 8.45 AM, AT THE JAPANESE GARDEN. Covering Date: 15/08/1977:

<http://www.nas.gov.sg/archivesonline/speeches/record-details/734b4e97-115d-11e3-83d5-0050568939ad>

IBM 21/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/322435718225764/>
A very clever ad in 1968 by IBM (International Business Machines), which not only highlights its (huge!) modern computer systems, but also plugs Singapore's industrialisation programme and IBM's collaboration with leading companies like Lee Rubber, Shell and Caterpillar.

You might say this was the beginning of the computer industry in Singapore.

In 1953, IBM Malaysia was established in a one-room office in Medeiros Building with just 3 employers.

In 1960, IBM chief Arthur Watson, on a visit to Singapore, stated that his company was keen to support the economic development of Malaya and Singapore.

In the following years, big companies and agencies in Singapore such as the Statistics Department began to install computer systems.

In 1964, IBM Malaysia had grown to occupy two floors of the Finlayson Building and had 28 employees. Two years later, it established a data centre in Singapore to assist managers of companies in data processing.

The IBM 1440 system, described as a mobile, low-cost, and labour saving machine for accounting and storage, measured 14 inches across and weighed 10 lbs.

In 1968, Singapore Polytechnic installed the IBM 1130 system (a 'scientific and mathematical computer') to train its 2,000 engineering students. It cost between \$100-200,000.

Picture: Singapore Trade, January 1968.

IBM high speed computer coming. The Straits Times, 28 December 1962, Page 16:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19621228-1.2.116.8>

Siew Gek I 19/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/321683338301002/>
Siew Gek (not her real name) was a young woman working in the assembly line in a Hewlett-Packard factory in Queenstown in the 1970s. She was part of a working class family – her husband was a lowly paid bus conductor.

Siew Gek started working in HP following the birth of her first child. Almost everyone opposed her decision – her husband, in laws and her own mother – they were ‘old fashioned’, she says.

But they had to accept her work because it helped pay the bills.

Siew Gek enjoyed factory work, believing that it would expand her horizon and opportunities. She became a lead girl, in charge of workers in her section. It was not an easy job, she explains, because ‘Some of them [the workers] have boyfriends who are gangsters. They talk back at their lead girls and supervisors’.

Her family lived in a one-room HDB flat, but she was determined to buy modern gadgets for the family. She quipped excitedly, ‘We just got a one-compartment refrigerator. It’s a brand new Acma model that cost over \$400’. But she also saved \$50 a month (a big sum in the 1970s).

Acma fridge: <https://kokbent.files.wordpress.com/2009/02/fridge.jpg>

Siew Gek’s story (not yet completely told – this is just the beginning!) comes from the book by Janet W. Salaff, *State and Family in Singapore. Restructuring a Developing Society*. Ithaca: Cornell University Press, 1988.

Safety signs 16/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/320596758409660/>
Have you seen these safety signs? They were presented at a workshop for safety in shipyards in 1976, organised by the Advisory Committee on Accident Prevention in the Shipbuilding and Repairing Industry.

Recommended to be printed out as posters and placed where they were readily visible, the signs were a straightforward way to communicate with the workers.

Some of the signs are familiar to the layman but others are less so, showing the unique working conditions of the shipyards.

The posters and workshop followed earlier studies on industrial safety, which showed that industrial accidents had been on the rise since 1960.

Source: Chew Pin Kee (ed.). *Management Workshop on Safety in Shipyards: Papers of a Workshop*. Singapore: Ministry of Labour. 1976.

Rollei 14/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/319834645152538/>
Guess where/what?

In the 1970s till 1982, 750 Chai Chee Road was the head office of Rollei Singapore. Rollei also had factories in Alexandra Rd, Jurong, St. Michael's Estate, and Indus Road (where I lived).

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19720516-1.2.44.2>

Shipyards 12/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/319105655225437/>

These maps show the shipyards of Singapore in 1975, which were located at Sembawang, Keppel, Jurong, Tanjong Rhu, and Serangoon. They could be categorised by size – large (e.g. Jurong Shipyard), medium (Hitachi Zosen) and small (Chin Huat Shipping).

These maps were produced in a survey by the Study Group for Accident Prevention in the Shipbuilding and Repairing Industry, formed by the Ministry of Labour and headed by academic Ang How Ghee.

Work in the shipping industry of early independent Singapore was hard and sometimes unsafe.

The Study Group was formed in response to the frequency of accidents in the shipbuilding and repair industry in the early 1970s – the highest among the industries of Singapore, even higher than in the construction industry.

It sought to reconcile industrial work safety with the pursuit of economic productivity, to ensure that technical expertise gained among workers was not lost.

The Study Group found that the large number of accidents was due to various factors: the lack of adequate safety measures, the influx of new workers into the industry, the pressure of work due to competition, and a lack of safety consciousness among workers, supervisors and management.

The most common accidents were due to falling, and to being hit by falling objects (e.g. many workers did not wear a hard hat).

In its recommendations, the Study Group emphasised the importance of safety consciousness and education. It also proposed to add improved shipbuilding and repair regulations to the 1975 Factories Act and to introduce a permit-to-work system documenting the hazards and precautions to be taken onboard a ship before work commences.

Source: Ministry of Labour. Accident Prevention in the Shipbuilding and Repairing Industry. Singapore: Ministry of Labour, 1975.

Ford Factory 9/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/318002135335789/>

The Ford Factory is synonymous with the Second World War and the fall of Singapore, so much so we have forgotten its own history.

The Ford Factory was established in 1926, originally at Dunlop House, Robinson Road, before moving to 351 Upper Bukit Timah Road. It was the first motorcar assembly plant built in Southeast Asia by the Canadian Ford Motor Company.

It made Nissan trucks for the Japanese forces during the war and afterward resumed its car assembly work.

In 1980, the factory was closed and turned into a warehouse, before the Singapore Heritage Society organised an exhibition there in 1992 called, Singapore Surrenders!

In 1997, the rear part of the factory was demolished but the front preserved as a national monument and turned into a war museum.

Fittingly, the Ford Factory shows that buildings and places can have different histories, some of which are submerged and forgotten.

This photo showing the half assembled vehicles at the front part of the factory is from the University of Wisconsin at Milwaukee library.

<http://collections.lib.uwm.edu/digital/collection/agsphoto/id/17566/rec/1>

Infopedia: Former Ford Factory

http://eresources.nlb.gov.sg/infopedia/articles/SIP_823_2004-12-13.html

Motor-car Developments. The Straits Times, 20 November 1926:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19261120-1.2.89>

Jurong Town Hall 7/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/317230855412917/>

Lovely photos of old Jurong Industrial Estate in a café inside Jurong Town Hall.

Nanyang Iron Nail, Jurong Tile Works, Fullmark, Malaysia Associated (bicycles), McGraw-Hill, Chartered Industries, Aiwa, Sumiden, Beecham are some of the names that adorn the walls of the café, having at one time or other been part of the history of the industrial estate.

The iconic Jurong Town Hall building, built in 1971, was the old HQ for the Jurong Town Corporation (which has moved next door to the JTC Summit). Two years ago, it was gazetted as a national monument.

Presently the Jurong Town Hall is the premises for the Trade Association Hub which would include the Chinese Chambers of Commerce and Industry, among others.

Infopedia: Jurong Town Hall

http://eresources.nlb.gov.sg/infopedia/articles/SIP_2016-04-01_102749.html

Photos by Tan Teng Phee

Patco 4/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/316306082172061/>

Patco Singapore Pte Ltd, an American manufacturer of car aircons, opened a plant in 1968 at 80 Hill View Avenue, Princess Estate in Bukit Timah.

It closed down in 1982.

Photos courtesy of

American pioneer industry factory in operation, The Straits Times, 10 April 1968

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19680410-1.2.83.7>

Jurong Phases 2-3 2/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/315406672262002/>

We went down to Gul Avenue, Circle and Road to document the ghosts and faint traces of old industries in Jurong Industrial Estate yesterday. These were industries that had stood there in 1975 but have mostly since been demolished or relocated.

Thanks to the Jurong Town Corporation which produced such a fantastic and detailed map of the estate.

At our first site, we got a nice bonus – the old sign for Komatsu Singapore was still standing, though faded and uncared for; the factory had been demolished.

And we found that the sites of Cameron Iron Works (renamed Cameron Singapore), Famco Asia, Asia Industrial Gases, and Singapore Takada were still around.

The other sites have been demolished, replaced by new ones as Singapore's economic priorities, or the fortunes of individual firms, changed.

The reality is what was once modern and new eventually becomes history. But we document them because these places were at the heart of Singapore's industrialisation in the 1970s, and of the lives of their many employees.

There is much more to do, we only covered a small corner of Jurong Industrial Estate yesterday!

Spyros 1/10/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/315017855634217/>

The explosion and fire onboard oil tanker S.T. Spyros in 1978 was one of the worst industrial accidents in Singapore history. 76 people (70 males and 6 females) died in the disaster.

The tanker, which was owned by Ulysses Tanker Corporation of Liberia and transporting crude oil, had docked at Jurong Shipyard for repairs.

That working conditions onboard the ship were extremely unsafe was not known to the ship's crew or the shipyard's workers on the fateful day of 12 October. The shipyard's safety regulations were not properly followed, and were also inadequate when a fitter used his cutting torch to loosen a rusted nut that day.

This triggered an explosion in the bunker below him, with 167 people working near the engine room. The explosion was followed by a flash fire with the heat estimated to be 3,000 degrees Celsius.

The disaster led the Ministry of Labour to appoint a Committee of Inquiry, headed by Senior District Judge Michael Khoo. The investigation was carried out by the British H.M. Factory Inspectorate.

The Committee found the fitter, Jurong Shipyard and its safety officer, and the ship's owners and Master guilty of contravening the law in respect of safety procedures. In particular, it discovered that the ship had deliberately diverted crude oil cargo into the bunker tanks.

It also proposed to amend the Port of Authority Singapore Regulations 1977 for all forms of petroleum and all parts of the ship including the bunker tanks to be inspected before work is carried out.

The fitter was found guilty of negligence and sentenced to six months' jail. He appealed against the conviction and won. He had said that it was common practice at the shipyard to use a cutting torch to remove rusted nuts.

Source: Committee of Inquiry into the Explosion and Fire on Board S.T. Spyros. The explosion and fire on board S.T. Spyros, 12th October 1978: The inquiry report. Singapore: Ministry of Labour, 1979.

"SPYROS" DISASTER - INJURED VICTIMS BEING RUSHED TO HOSPITALS.

Covering Date: 12/10/1978

<http://www.nas.gov.sg/archivesonline/photographs/record-details/e4739537-1161-11e3-83d5-0050568939ad>

Bridgestone 29/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/314413895694613/>

As you may guess from the photo, Bridgestone is a Japanese tyre company founded in Fukuoka in 1931 by Shojiro Ishibashi, whose family name means 'stone bridge'.

In April 1965, just before Singapore separated from Malaysia, Bridgestone opened its first overseas plant in Singapore called Bridgestone Malaysia. This was a \$20 million joint venture between Bridgestone and Pan-Malaysian Cement Works.

Located at 136 Jalan Ahmad Ibrahim in Jurong Industrial Estate, Bridgestone Malaysia was the first tyre company based in Singapore.

Both Malaysian Prime Minister Tunku Abdul Rahman and Singapore Minister for Finance Goh Keng Swee were at the opening of the company.

As Singapore PM Lee Kuan Yew noted, this was also the first time Singapore would make tyres, after decades of packing and exporting rubber from Malaya and the Dutch East Indies.

Photo: Singapore Trade and Industry, December 1972.

JURONG: Spectacular success SAYS TENGGU. The Straits Times, 4 April 1965:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19650404-1.2.63>

Bridgestone website: <https://www.bridgestone.com.sg/corporate/profile.html>

Vocational graduates 27/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/313594919109844/>

Vocational education is often not regarded highly in Singapore, but the vocational graduates of 1969-71 as a group did well in the 1970s, as a 1981 survey of 2,215 graduates showed.

Most of those surveyed were employed and drawing good salaries relative to their education and vocational training.

Many of them were economically mobile: 70% had changed jobs once and 40% at least twice, so they had opportunities to move to better prospects as Singapore's industrialisation shifted into higher gear. Nearly 40% had resigned their previous jobs for a better paying one.

Others who changed jobs improved their position or were promoted to supervisory or managerial positions. Many production workers became technical workers.

Especially insightful are the interviews of vocational graduates. One of them, who had failed his PSLE exams, said, 'If not for the training and the knowledge I received through your Vocational Institute Training Programme, I would not have become what I am today. Thanks to the skills acquired, I am able to become a better and useful citizen'. He only had a Sec 2 education but was earning \$1,200 as a supervisor.

Source: Economic Research Centre, University of Singapore. The Employment Experiences of 1969-1971 Vocational Graduates. 1980.

BAHARUDDIN VOCATIONAL INSTITUTE AT STIRLING ROAD. 18/11/1987:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/fd4c7a78-1161-11e3-83d5-0050568939ad>

The Baharuddin Vocational Institute, one of several vocational institutes, was established as Singapore expanded technical and vocational education amid the British bases pullout in the late 1960s. A brief write-up on its history and courses:

<http://justinzhuang.com/posts/baharuddin-vocational-institute/>

1985 recession 25/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/312865392516130/>

Do you remember the 1985 recession, one of the biggest in Singapore's history? The major industries, such as construction, manufacturing, semiconductors, oil refining, and shipbuilding, were hit by global (increased competition, reduced external demand) and local (high labour costs and rentals) factors. The recession came as a shock to many. Unemployment rose from 2.9% to 4.1% - some of the impact was cushioned by retrenchment of foreign workers.

The government's response was to form an Economic Committee headed by Lee Hsien-loong, the Minister of State for Trade and Industry and Defence.

Some of the Committee's proposals were short-term, such as to reduce costs and boost competitiveness by cutting down CPF contributions from 25% to 10% (which was met by considerable opposition) and freezing wages for 2 years.

But the longer-term changes that came out of the Committee's recommendations were more far-reaching. Singapore's economic and industrial success since 1965 had largely been due to what economist Linda Lim had called 'the long arm of the state' (rather than the invisible hand of the market).

But now, as the Economic Committee proposed, it was necessary to privatise state-owned industries and deregulate the economy. This would happen in subsequent years in various sectors of the economy, beginning with Singapore Airlines.

In the West, privatisation and scaling back the state had become buzz words in the 1980s – remember Reaganomics?

Jonathan Rigg, 'Singapore and the Recession of 1985', *Asian Survey*, Vol. 28, No. 3 Mar., 1988, pp. 340-352.

How the team of seven got the economy back on track, *The Straits Times*, 23 August 1988:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19880823-1.2.34.3>

Singapore experiences its first post-independence recession:

<http://eresources.nlb.gov.sg/history/events/9f9489cf-5432-4797-bf66-fd1b3bab7a2b>

IF Tang 22/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/311807949288541/>

A lovely story from I-Fang (or simply IF) Tang, a China-born, US-based, engineering-trained economic adviser and businessman who later became a Singapore citizen. Tang was Albert Winsemius' right-hand man on his UNDP mission to Singapore in 1960-61.

In the book *Heart Work* (Vol. I), Tang tells of how the UNDP asked him if he would like to go to Singapore on a development mission – he had never been here – and how Winsemius was initially reluctant to come to Singapore – he had heard that it was 'going communist' and didn't want to be on a lost cause. It was only after Winsemius had accepted the mission (with Tang agreeing to be his deputy), and met Singapore's leaders, including Lee Kuan Yew and Goh Keng Swee, at the Istana that he quipped, 'I don't smell any communists in there. Indeed, they are the wisest leaders I have ever encountered'.

Another story from Tang: the Winsemius team visited the Industrial Promotion Board (predecessor to the EDB) in the Fullerton Building, headed by the socialist economist James Puthuchery. Puthuchery, pointing to the statue of Raffles below, joked that it be pulled down and replaced with a statue of Marx or Lenin. Now we know why Winsemius proposed to Singapore to keep the Raffles statue!

Tang died in 2013 at the age of 89. He was Businessman of the Year in 1989 and had also served as chairman of the EDB. In 1972, he was awarded the Distinguished Public Service medal for his contributions to Singapore.

Source: I.F. Tang, 'A Lemon or a Rolls Royce', in Economic Development Board, Heart Work: Stories of how EDB steered the Singapore Economy from 1961 into the 21st Century (Singapore: Singapore Economic Development Board and EDB Society, 2002).

Veteran Public Servant And Businessman Tang I-Fang Dies, 89, The Straits Times, 27 Sep 2013:

<http://www.stjobs.sg/career-resources/personalities/veteran-public-servant-and-businessman-tang-i-fang-dies-89/a/137608>

Shell 20/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/311073536028649/>
The Shell House building, overlooking the seafront at Collyer Quay, was built in 1960 and home to Shell's regional headquarters in Southeast Asia. It was 15 storeys high (the 4th tallest building in Singapore) and fully airconditioned.

The following year, Shell's new oil refinery opened on Pulau Bukom, an island off the southern end of the main island. It was at the time the biggest oil storage and processing plant in Southeast Asia, with equipment to convert oil-grade petrol into high quality products.

1,000 employees lived on the island, along with their dependents, who numbered 4,000.

Bukom was a complete industrial town with its own housing, educational, health, and recreational facilities. The island itself had nearly doubled in size through land reclamation, as you can see from the map.

Shell's venture was a boost to Singapore's new industrialisation plan, which many at the time doubted would succeed. Explaining why the company set up here, its local general manager said, 'Singapore, for Shell, is a natural choice, in view of the company's long associations there, its position at the cross-roads of South-East Asia and its prospects for development'.

Source: Singapore Trade Enquiries Bulletin, February 1961.

New Shell House will be ready this month, The Singapore Free Press, 19 March 1960:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/freepress19600319-1.2.85>

CPS Nathan 18/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/310406346095368/>
CPS Nathan was a teenager when he got his first job at Hume Industries in 1947. Not wanting to study at the time, he boldly approached the manager of Hume for a one-month trial at the company. Nathan was brought to meet the boss, whom he called the 'old man', who employed Nathan in his office to sort out his files and answer the phone.

Nathan spent only a year at Hume before leaving to join the British Royal Engineers, but I think he did quite well and left an impression, as you can see from his testimonial.

Nathan and his family lived in a kampong opposite Hume Industries, which was located at 8½ Mile Bukit Timah Road and the biggest outfit in what was then Hillview Industrial Estate.

Hume was a manufacturer of pipes of various kinds and it also made concrete structures which were used in building many of Singapore's flyovers.

Nathan's testimonial from Hume contains interesting information about the company, its former name (Hume Pipe), products, and telephone numbers.

His family lived on the Malayan side of the railway that ran through the area, and according to him officials from Johor collected rent from them.

James Tann's blog has some fantastic photos and a nice write-up of Hume, which has since disappeared along with other industries in the estate.

Nathan is now 89. He later obtained a certificate in machinery which allowed him to work in Singapore Foundry and Machinery. He retired officially from PUB in 1987 but continued to work, as a security guard, until six years ago. A man born to work (rather than study), with many stories of the places he worked and things he saw.

<http://ijamestann.blogspot.sg/2013/06/factories-around-pee-10-hume.html>

Nicholas White 16/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/309754276160575/>

An interesting article that compares the economic development of Singapore, Malaysia and Indonesia after independence. Unlike Indonesia, which was handicapped by restrictive economic agreements with its former colonial power, the Netherlands, Singapore and Malaysia benefited from more liberal agreements with Britain. The article cites my research that the support and assistance the British gave Singapore, when closing the military bases in the late 1960s, helped propel our spurt of economic and industrial growth in the 1970s.

Article is free to read!

<http://booksandjournals.brillonline.com/content/journals/10.1163/22134379-17302003>

Places we worked 14/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/309020832900586/>

The images of Singapore's industrialisation are the places we and our parents worked, the uniforms we wore, the tools we used, and the things (and friends and enemies) we made.

These photos adorn the official and corporate publications – in this case, the 1980 EDB annual report, but the publications mostly tell the macro story of the economic and industrial developments of Singapore or the company.

But the images also tell smaller stories of work over a lifetime which are no less valuable and memorable.

Naptha 12/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/308339669635369/>

We know Singapore has no natural resources, but here's a little titbit of info: we are rich in naptha, a colourless oil commonly used as a solvent or fuel.

Naptha is a raw material in petrochemical manufacturing, which became one of Singapore's major industries in the 1970s and developed as an offshoot of the older petroleum refining.

The showcase site for the industry was the massive \$2 billion Petrochemical Complex of Singapore on Pulau Ayer Merbau, off the southern coast of Jurong. It was established in 1977 as a joint venture between Singapore and a Japanese-owned holding company.

Previously, the island's history was very different – goats were grazing the fields!

Visit to Pulau Ayer Merbau - The goats grazing on the island. Covering Date: 20/11/1961

<http://www.nas.gov.sg/archivesonline/photographs/record-details/658a8111-42d5-11e4-859c-0050568939ad>

Source: Hong Kong and Shanghai Banking Corporation, Economic and Social Conditions in Singapore 1975.

Official webpage of the Singapore Petrochemical Complex:

<http://www.pcs.com.sg/singapore-petrochemical-complex/milestones-of-singapore-petrochemical-complex/>

Sin Cheong 10/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/307680579701278/>

Sin Cheong Containers Manufacturers then and now, at 6 Gul Drive, its home since 1973.

Sin Cheong started as a tin company in 1935 and the containers company was established in 1963. It made different types of containers, including paper, plastic and metal, with colourful labels.

http://www.sincheong.com.sg/products_files/stacks_image_111.jpg

Integrate related stages of production, says Ong. The Straits Times, 30 November 1964:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19641130-1.2.73>

Source: Singapore Manufacturers' Association Directory, 1968.

Photos by Juria Toramae.

Technical education 8/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/305603009909035/>

Do you know that a Technical Education Department was established in the Ministry of Education in June 1968? This was part of a big push for technical and vocational education to support the industrialisation programme, made more urgent by Singapore's separation from Malaysia and the shorter time frame for closing the British military bases.

From the TED came various reforms: to introduce technical education at lower secondary level; offer technical subjects at Higher School Certificate level; expand vocational education and industrial training; and convert Ngee Ann College into a technical college and eventually a polytechnic.

The aim was to remake education with a technical and technological bias. In 1968, there were 140,000 students studying academic subjects, compared to 18,000 in technical and vocational schools.

One of the problems Singapore faced was the shortage of experienced workshop instructors and assistants; another the 'white collar' mentality and prejudice against technical and vocational education among parents and students.

It was a time of change for students and teachers. Do you or your parents remember having technical lessons in secondary school? (I was pretty bad at them)

All male and half of the female students in Secondary 1 and 2 also had to have 35 hours per term of practical workshop experience outside school hours once a week.

It was also a momentous experience for many teachers, who had to take courses to teach technical subjects. In 1969, 250 general education teachers completed their training in technical subjects, though a small number did not make it due to a 'lack of aptitude or poor performance'.

Source: Technical Education Department, 3rd Annual Report, 1970-1971.

NIGHT VIEW OF QUEENSTOWN TECHNICAL SECONDARY SCHOOL EXTENSION
IN STRATHMORE AVENUE DURING IT OPENING BY MINISTER FOR EDUCATION
ONG PANG BOON Covering Date: 02/04/1968

<http://www.nas.gov.sg/archivesonline/photographs/record-details/ce0c21a4-1161-11e3-83d5-0050568939ad>

Kampong Sar Kong 6/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/306311416504861/>

I'm really thankful to receive a copy of this book from Yik Han, which traces in loving detail the history of Kampong Sar Kong and its landmark temple Mun San Fook Tuck Chee.

The economic life of the kampong and livelihood of its mostly Cantonese residents centred around the trade along the Kallang River.

This gave rise to numerous labour-intensive industries and workshops in the area from the 19th century, such as brick kilns, sawmills, sago factories, shipyards, and tanneries.

This was all before Singapore's industrialisation programme in the 1960s.

Coming from my research on the urban kampongs, Sar Kong immediately caught my attention. The name is local (meaning 'sand dune'), so what was its official name in English, which would allow us to trace its history through the British records?

But we can roughly place Sar Kong within the history of the urban kampongs. It had a voluntary fire-fighting squad like many of these kampongs: many of these squads were organised in 1958 by the City Council and Fire Department.

It had earlier been designated as a fire-prone area in 1953. I attach the list of fire-risk areas in 1954 from the SIT (Singapore Improvement Trust) files – this was one of those striking early sources I saw which told me, yes I'm on the right track for my PhD!

In the 1955 Master Plan, Sar Kong would have been a 'tolerated attap area', since it did not face demolition in the 1960s.

The kampong subsequently underwent several changes, due to the reclamation of the Kallang Basin in 1963 and establishment of the industrial estate there, and the clean-up of Singapore's rivers, including Kallang, in 1977.

I suspect there is also good material to be found from the United Nations archives, as the agency was involved in the reclamation project (I have the records but haven't looked through them yet).

So there is probably enough material for another book on the kampong, and perhaps the entire Kallang Basin area ☺

Sar Kong was evicted only in 1979 (this was pretty late as far as the urban kampongs go) and its residents rehoused in HDB flats nearby.

Sar Kong tells us much about the dynamics between urban kampongs/'squatter areas' and industry – both were largely spontaneous developments before the dynamics changed under a regime of state planning for the whole of Singapore.

Bee a Team 4/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/305603009909035/>

Do you remember Teamy, the mascot of the productivity campaigns? We were constantly being told to work as a team, to be more productive.

Teamy was a creation of the National Productivity Board in 1982.

The productivity drive goes back to 1965 and the establishment of the National Productivity Centre the following year. The Centre was replaced by the National Productivity Board, a statutory board, in 1972.

Originally productivity was conceived as the need for industrial harmony between employers and workers. This was as Singapore abruptly became independent, needing to be competitive in the international economy.

Subsequently productivity became a buzzword as Singapore sought to move to higher technology industries and a more skilled workforce in the late 1970s.

Do you know the idea of productivity was much influenced by Japanese ideas and practices of teamwork?

Teamy retired in 1999 (but not the productivity campaign!)

Bee a Team:

<http://www.nas.gov.sg/archivesonline/posters/record-details/32b042c2-115c-11e3-83d5-0050568939ad>

Infopedia article:

<http://eresources.nlb.gov.sg/history/events/1322f7a8-b6d8-4d0f-89cb-0c712119b7a5>

Economic Development Board, Annual Reports 1965-66, 1972, 1978.

Pre-war industry 1/9/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/304514453351224/>

Did Singapore have industries before the Second World War? Many of the posts here have been on postwar industries (Of course the question also depends on how we define 'industry').

If we take a look at Song Ong Siang's mammoth work on the history of Chinese businessmen and community leaders, published in 1923, he mentions several industries:

- Rubber (not surprising since it was one of Malaya's major exports).
- Pineapple canning and packing (related to rubber because pineapple was often grown together with rubber trees, taking a shorter time to mature).
- Timber industry and sawmills (wood for pineapple crates!).
- Biscuits factories.
- Spirits factories.
- Sago factories.
- Ice factory.

Naturally enough most of these were family-owned enterprises connected to the entrepot trade – which was the dominant part of Singapore's economy – and the produce of the region, and the needs of the people who lived and worked on the island.

Song Ong Siang goes into detail on the people behind these businesses such as Lim Nee Soon and Tan Kah Kee who owned the bigger establishments.

Going further into the 19th century, among the common occupations in Singapore some were connected to industry and manufacturing, as Seah Eu Chin tells us in 1848:

'The different trades and professions are schoolmasters, writers, cashiers, shopkeepers, apothecaries, coffin makers, grocers, goldsmiths, silversmiths, tinsmiths, dyers, tailors,

barbers, shoemakers, basket makers, fishermen, sawyers, boat builders, cabinet makers, architects, masons, lime and brick burners, sailors, ferrymen, sago manufacturers, distillers of spirits, cultivators and manufacturers of gambier and of sugar, cultivators of pepper and nutmegs, vendors of cakes and fruits, porters, play-actors, fortune-tellers, idle vagabonds – who have no work and of whom there are not a few – beggars, and, nightly, there are those villains, the thieves’.

Not to forget there were non-Chinese industrialists in Singapore and their ventures not covered in the book.

You can download Song Ong Siang, One Hundred Years’ History of the Chinese in Singapore (1923). This updated version includes useful annotations which provide additional information.

<http://www.nas.gov.sg/citizenarchivist/Annotate/Transcribe?itemId=33548&collectionId=134>

Singapore Light Industries Mission to Japan 1971 30/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/303872503415419/>

Do you know that Japan played a role in Singapore’s industrialisation?

In 1971, Singapore sent a Light Industries Mission to Japan. The mission comprised 8 bankers and 17 industrialists, and was led by Wee Mon-Cheng, a banker and industrialist.

It visited Tokyo, Nagoya, Osaka, and Kyoto, and particularly Hiroshima and Fukuoka, major centres of Japanese light industry, and met with Japanese policymakers, industrialists and bankers.

The mission’s aim was to explore opportunities for joint ventures with Japanese firms and to learn from Japan’s economic recovery after World War Two.

But the purpose really was to ‘break the ice’, as Wee put it. Japan was an important trading partner of Singapore in the early 1960s, despite popular reservations arising from the Japanese occupation of Singapore during the war.

But Singapore had become concerned about diminishing economic ties with Japan in recent years as its investors focused more on Indonesia. Singapore’s departure from Malaysia also left it with a much smaller domestic market.

The mission held a Singapore goods exhibition at Akasaka. Among the immediate outcomes of the visit was a joint venture between Amoy Canning (which had a representative on the mission) and Sago Kogyo, a Japanese civil engineering firm. A new petrochemicals company called Showatex was also formed between Singapore and several Japanese companies.

Source: Economic Development Board, Report on the Singapore Light Industries Mission to Japan, April 1971.

Maryati and Hassan 28/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/303216240147712/>

Production work was boring but she stayed on because of her close friends in the line.

Maryati worked at Rollei in the 1970s and then at Seagate in the 1990s (in the interim she took care of her children).

She became a ‘lead girl’ at Rollei in charge of about 15 operators, and was in fact selected for training in Germany but because she was pregnant she was unable to go.

Maryati's husband Hassan was a security guard at Rollei from the beginning in 1971 till the company shut down in 1982. They met at Rollei. To my surprise, Hassan had many interesting stories to tell of his time at Rollei.

As Maryati explained, the operators knew production, but security guards knew people. Hassan became a delivery driver and then a taxi driver when Rollei closed. Maryati was retrenched when Seagate downsized and moved from Ang Mo Kio to Senoko.

It was really good to speak to Malay workers who played a part in Singapore's industrialisation.

Maryati at work: for the photos I am thankful Rollei made cameras and she had to test whether they worked!

Wages 26/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/302536963548973/>

Do you know how much industrial workers made in the past?

Pay was low in 1963 and 1970 but jumped in 1980.

Average monthly pay of workmen by industry (\$)

<i>Industry</i>	<i>1963</i>	<i>1970</i>	<i>1980</i>
Textiles	114	121	506
Garments	--	119	414
Food	169	170	534
Beverage	195	268	798
Shipbuilding	304	412	942
Rubber products	143	211	703
Electrical machinery	247	131	514
Non-electrical machinery	215	237	731
Electronic products	--	--	443
Metal products	185	220	563
Iron and steel	--	319	897
Petroleum	186	465	1,432
Wood products	205	243	598
Publishing	228	247	604
Total	188	207	560

Source: Department of Statistics, Census of Industrial Production, 1963-1980. Gross figures not adjusted for inflation.

Singapore Science Park 24/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/301850350284301/>

The original 125-ha Singapore Science Park was built by the Jurong Town Corporation in the early 1980s.

Industrial research was part of Singapore's industrialisation from the 1960s. But the Singapore Science Park was conceived as a comprehensive R&D hub to move Singapore

industry (especially electronics) up the technology chain, in areas such as biotechnology and artificial intelligence.

Located at Ayer Rajah close to the National University of Singapore, the park also sought to develop closer collaboration between industry and academia.

Interestingly, the park was modelled upon similar parks in other developed Asian countries, namely, Japan, Taiwan and South Korea.

The early tenants of the park included the Norwegian Det Norske Veritas Marine Technology Centre, the National Computer Board's Software Technology Centre, SISIR's Materials Technology Applications Centre, Seagate Technology, and Austek Microsystems.

GENERAL VIEWS OF SINGAPORE SCIENCE PARK. Covering Date: 19/11/1987

<http://www.nas.gov.sg/archivesonline/photographs/record-details/fd7b3dd9-1161-11e3-83d5-0050568939ad>

Redhill 22/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/301165337019469/>

In 1960, the government began building its first industrial estate at Redhill, which would contain sites for 34 small and medium factories. Redhill was a joint project between the newly formed PAP government and the British colonial government – the contractors were Singapore Factory Development Ltd, a subsidiary of the Colonial Development Corporation. The building of Redhill showed the government's increased role in industrialisation.

Four years later, Kwang Joo Seng, the makers of the famous 'Chicken Brand' cooking oil, opened a factory in Redhill. The original factory had been destroyed in the great fire of 1961 in Kampong Bukit Ho Swee. It was rebuilt there and then relocated to Redhill in 1964.

Redhill found its factory workers from the SIT and HDB estates nearby (Henderson, Bukit Merah, Delta-Havelock, and Tiong Bahru), as well as the diminishing kampongs (Si Kah Teng, Hong Lim Pa Sat and Bukit Ho Swee). The first emergency flats of Bukit Ho Swee estate were erected in 1962 after the fire.

Following Redhill, the government built further industrial estates in Tanglin Halt, Bendemeer Road and Kampong Ampat.

GUESTS WATCHING A FEMALE WORKER CLOSING LIDS OF GROUNDNUT OIL CANS WHEN THEY TOUR KWANG JOO SENG GROUNDNUT OIL MILL IN REDHILL INDUSTRIAL ESTATE DURING ITS OPENING

Covering Date: 29/01/1964

<http://www.nas.gov.sg/archivesonline/photographs/record-details/63d8c084-1162-11e3-83d5-0050568939ad>

“Redhill” gets under way’, Singapore Trade, December 1960.

The Gans 19/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/300153997120603/>

Interviewing the Gans was literally meeting a wall of voices! Spontaneously and often speaking simultaneously, the three sisters told me of their work in various garments factories in the 1970s and 1980s: beginning in a small factory as underage workers and to larger

establishments like 耀泰 (English name unknown but was in a 10-storey building at Tanglin industrial estate), Wing Tai and a Japanese company (name unknown).

The word that leaped out at me most was 拼命 – to do the utmost, which aptly expressed their attitude towards work. They told me repeatedly how hard they worked, how thrifty they were and yet also how happy they were working. There was no envy among the workers (there could have been because they were paid according to the amount of work and the parts of the shirt they sewed).

The sisters got along well with management (which was from Hong Kong). There was no bonus or yearly increase; from hindsight they admitted they were naïve for not having asked for more! There was no pressure despite the intensity of work.

The interview captures the depoliticised working environment in Singapore after independence. I wonder if it also harkened back to before the appearance of unions in the 1940s-1960s when relations between employers and workers (among the Chinese at least) were a lot more reciprocal. There is evidently also nostalgia in the memories – were they shaped by how stressful life has become in recent decades?

Much food for thought from interviewing the workers.

Small-scale manufacturing 17/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/299422643860405/>
Small-scale manufacturing industries were one of the neglected areas of Singapore's industrialisation, often seen as inefficient, unproductive and badly managed – at least until the 1986 Economic Report.

They are thus also a little-studied area in Singapore's economic history.

Here is an interesting report on a preliminary survey of 200 such industries employing 1-9 workers in 1973 by researcher Amy Wong from the Economics Research Centre of the University of Singapore.

The survey looked at various industries from the making of noodles, shoes, furniture, and shirts to printing and metal and engineering works. Nearly all of them produced goods for the local market, with few links to the larger, export-oriented industries. Most of them were also fairly new firms under 10 years of age.

One of the interesting findings in the report was how these small manufacturing firms acted as a cushion to absorb unemployed workers and also provided initial training for new workers, mainly those from the extended family.

There was also a fair amount of mobility – upwards and sideways – as younger employees moved to other jobs or set up their own establishments. This sometimes made it difficult for the firms to find the workers they needed.

Most employees were male, although the bigger firms had more female workers. They generally had primary education or lower.

The survey ends on a cautious note about the future of these establishments.

The EDB reports mention a Committee on Tariff Matters which dealt with matters concerning protection for local manufacturers. Very little is known about the committee and its work. The general understanding is that Singapore avoided tariff protection for local industries and welcomed exports from abroad.

Amy Wong. A Survey of Selected Small-Scale Manufacturing Industries in Singapore. Economics Research Centre, University of Singapore, 1973.

NOODLE MAKING FACTORY - VIEW OF MAN AT WORK. 19/12/1962:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/bade3c1d-1161-11e3-83d5-0050568939ad>

F&N 15/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/298725030596833/>

In 1960, people in Malaya and Singapore were introduced to the taste of 7 Up. This well-known drink was distributed by the company F&N, named after Englishmen John Fraser and David Chalmers Neave, who founded what was originally known as the Singapore and Straits Aerated Water Company in 1883. Its first factory was at Battery Road.

In 1898, the company was sold to a new public company called Fraser & Neave, which is one of the oldest companies in Singapore.

Apparently by 1910, F&N's aerated drinks had become 'the best in the Straits Settlements and second to none in the Far East', as claimed in the Singapore Trade Enquiries bulletin (January 1962, p. 12).

Besides soft drinks, F&N also produced the beers that we still drink today – Anchor, Heineken and Tiger (it started brewing beers in 1931).

In addition to 7 Up, it distributed Fanta, Sunkist and Ang Sai (Red Lion), while its subsidiary, Lion Limited, distributed Coca Cola.

On a related note, the monthly bulletin, Singapore Trade Enquiries (later Singapore Trade and Industry) jointly published by the Straits Times Press and Ministry of Finance, contains very interesting articles and advertisements that promoted Singapore's business and industry to local and international readers. It is indispensable for any study into the economic history of Singapore.

The earliest issue I have – published in January 1962 – offers insights into varied topics such as:

- Singapore's prospects in industrialisation, by the EDB's first director, E.J. Meyer.
- Germany as Singapore's major trade partner.
- Singapore's textiles trade and hub at High Street.
- Pasar malams – the 'booming mobile shopping centres' of Singapore (p. 5).

The back end of the bulletin contains trade inquiries to Singapore from companies in Southeast Asia and all over the world and the products they were interested in importing and exporting.

Of course in the background of these shiny articles, statistics, photos, and enquiries was a mammoth effort by business and government to try to dispel the international image of the 1950s of a Singapore that was 'going down the drain', as Winsemius put it.

History of Fraser & Neave (F&N):

http://eresources.nlb.gov.sg/infopedia/articles/SIP_1792_2011-03-04.html

MNCs 13/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/298071030662233/>

A tiny sample of the over 3,000 multinational companies based in Singapore in 1989, from the EDB annual report that year.

Singapore owed much of its industrialisation to them, and in a real sense we were fortunate that from the 1960s these companies were moving their operations offshore to countries where production and labour costs were lower (Singapore offered them favourable tax incentives and stable industrial relations).

But this relocation also led to severe unemployment and the decline of industrial cities and communities in the home countries, which is another side of the history.

By 1989, as you can tell from some of the companies in the picture, Japan had overtaken the US as Singapore's largest investor.

By this time, the industries were more high-tech and skills-based than those in the 1960s. Besides manufacturing, there was also a new emphasis on services, as recommended by the Economic Committee in 1986.

And a new buzzword in the language of government and the EDB was 'globalisation'.

Singapore had always been open to world trade, but now the economic development would take a form familiar to us in the present day.

Ex-Rollei Mr Chong and Mr Chew 11/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/297320637403939/>

Thanks to the previous Rollei post, I built up a list of former employees of the company. Last night, I interviewed the first 2 on the list: Mr Chong and Mr Chee, who were both pioneer technicians at Rollei in the 1970s. They got to know each other on the training trip to Germany, as they were assigned to set up production lines for camera shutters in the Singapore factory at Kampong Chai Chee, where they became supervisors.

They were colleagues not for very long. Mr Chong left in the mid-1970s and became a lecturer at the German-Singapore Institute while Mr Chee suffered retrenchment when Rollei closed in 1982. But as he joked, he was jobless for a day before he interviewed successfully at General Electric overseeing the production of resistors and transistors. Mr Chee, who was originally Malaysian, has an especially interesting story because he has worked in different industries but, as he explained, he could adapt because the basic production processes remained largely the same.

Mr Chong brought out his Rollei 35 LED camera, took it apart. Some parts are a bit tight but the camera works even after 30 years. How many of you have this camera?

He also showed me his photos from the training stint in Germany, which was 7 months long. It seemed that it was this period of training that connected Mr Chong and Mr Chee's friendship after their career paths diverged. It certainly left a strong impression on Mr Chong, who reflected on how disciplined and productive the Rollei workers were in Germany – it turned out that they were Yugoslavs, not Germans.

Time for a reunion of the Rollei alumni perhaps?

Made in Singapore 9/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/296713627464640/>

The 'Made in Singapore' label.

So much of the industrial products in Singapore was for export, while Singaporeans tended to prefer foreign-made goods to locally-produced ones. Many local companies were reluctant to print the 'Made in Singapore' label on their products.

There were exhibitions of locally made goods to try to change this perspective, such as a trade exhibition organised by the Singapore Manufacturers' Association in 1971, which featured Lam Soon, Prima Flour and South Sea Industrial among others, and was attended by heads of states of various Commonwealth nations.

One problem was that imported goods (e.g. from Hong Kong) were often cheaper and offered original designs. In the late 1960s, the EDB attempted to persuade local manufacturers to more pay attention to industrial design.

PM VISITS MADE IN SINGAPORE GOODS EXHIBITION AT THE NATIONAL STADIUM COMPLEX. Covering Date: 04/09/1973:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/dd50282f-1161-11e3-83d5-0050568939ad>

C'wealth VIPs at opening of local goods exhibition, The Straits Times, 17 January 1971:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19710117-1.2.37>

Citizens speak out in support, New Nation, 6 October 1971:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19711006-1.2.71>

Interview with Mdm Deng II 7/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/295922520877084/>

Continuing from the previous post on Mdm Deng, she was in a movie called 狮子城(Lion City), in which she played a worker in the rubber factory she was working in (振福 I imagine)!

She talked about it excitedly during the interview and her son found it on YouTube.

Mdm Deng is on the left in the segment below.

狮子城: <https://youtu.be/EdqLHBUtyJE?t=676>

Interview with Mdm Deng 6/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/295524804250189/>

I had an excellent interview with Mdm Deng last Friday, who is 85 and told me about her work in two rubber factories in Singapore in the 1950s and 1960s. One of them was Dunlop and I'm trying to figure out the other one, which went by the Chinese name, 振福 – does anyone know it?

Mdm Deng rather dutifully answered all my questions about her work. At one point she excitedly stood up from the table and walked over to the living room to show me how the work was done in the factory, more than 60 years ago, as you can see from the photo below. It is still fresh in her mind.

I really appreciated the interview because Mdm Deng told me her story – whereas many interviews, especially with civil servants and politicians, tend to become mini-histories of Singapore.

For Mdm Deng, it was her life, her family, her relationships with her colleagues that stood at the heart of her memories. She talked animatedly about her 'sisters' at the rubber factory, who helped her in her wedding and whom she maintained close contact till today.

Her 'history' is also not about dates or events, but about values and the lessons she learnt from her years of work and relations with people.

So Mdm Deng's recollections repeatedly cross the boundary between past and present.

Many historians distrust oral history because of these factors. For me it's always remarkable how people tell their stories, and I always find time for oral history when I do research on the history of Singapore because older Singaporeans are wonderful storytellers.

Nissin 4/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/294795810989755/>
Nissin, the famous brand of Japanese instant noodles, was a relative unknown here when the company set up a production plant for cup noodles at Senoko Industrial Estate in 1980, thanks to the efforts of the EDB.

Did you try a cup at the time? Most of the production was for export to Hong Kong and Southeast Asia, but it also catered to the local market. Previously only small quantities of Nissin noodles, imported from Japan, were sold at Isetan and Yaohan.

Other instant noodle brands then were Maggie, Myojo and Koka. Cup noodles were first introduced by Nissin in 1971.

Nissin decided on Singapore instead of Hong Kong because of lower production and labour costs. The factory was small and initially employed 50 workers. It was Nissin's fifth established outside Japan.

The food and beverage industry in Singapore has a long history reaching into the prewar period – biscuits, soy sauce and soft drinks by local manufacturers for instance. In the period of intensive industrialisation in the 1970s and 1980s, what was distinct was a strong push by the Singapore government to encourage greater automation and value-added products in F&B.

History of Nissin: https://www.nissin.com/en_jp/about/history/#1950s

Nissiri Foods to produce instant noodles for export, BUSINESS TIMES, 11 November 1981, Page 6

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/biztimes19811111-1.2.12.8>

Rollei 2/8/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/294088007727202/>
Do you remember the Rollei camera factory at Kampong Chai Chee?

In 1971, the EDB persuaded the German company Rollei to set up a production factory in Singapore for cameras and related optical equipment. Two years later, the company and the Singapore government jointly established a training centre for workers in precision optics, tool-making and precision machining.

Training centres such as this were an important part of government policy, which was not just for Singapore to make industrial products, but also to transfer technical and management skills and expertise to local workers for Singapore to move away from low-wage industries to higher-technology and value-added ones in the 1970s.

As Mr Lee Kuan Yew narrated in his memoirs, Rollei would close after 11 years due to intense competition from Japanese camera makers, and the EDB found it hard to explain to foreign investors that this did not portend Singapore's failure to move up the technology chain. But the training of 4,000 workers in precision engineering became useful in the 1980s when disk drive makers set up base in Singapore.

ROLLEI CAMERA FACTORY IN KAMPONG CHAI CHEE. Covering Date: 21/03/1979
<http://www.nas.gov.sg/archivesonline/photographs/record-details/b4a7e732-1162-11e3-83d5-0050568939ad>

Lee Kuan Yew. From Third World to First: The Singapore Story, 1965-2000, Volume 2
https://books.google.com.sg/books?id=_HBPBAAAQBAJ&lpg=PT54&ots=4VEkj8ZCBR&dq=rollei%20singapore&pg=PT54#v=onepage&q=rollei%20singapore&f=false

Resettlement and new Malay Settlement at Pulau Merlimau 30/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/293393751129961/>

In 1963, as a result of the development of Jurong Industrial Estate and new town, the HDB began to resettle 23 Malay families in Jurong to a newly created Malay Settlement on Pulau Merlimau, just off the southern coast.

The settlement would have social amenities, including a school, mosque and community centre, and it was hoped that the villagers would take up jobs in Jurong Industrial Estate and 'be integrated in the urban community of the New Town' (EDB 1963 Annual Report, p. 39).

The following year, some 370 Malays who were living on Pulau Semulon/Samulun were resettled in a new kampong called Limau Manis on Pulau Merlimau, to make way for the building of Jurong Port. Half of the villagers were reportedly found employment in Jurong Industrial Estate.

Other Malay families in Jurong were resettled in a Resettlement Area 53-A but I don't know where this was.

In 1971, the residents of Pulau Merlimau were resettled to make way for the building of an oil refinery complex.

Unedited Description Supplied by Transferring Agency:

PARLIAMENTARY SECRETARY TO PRIME MINISTER'S OFFICE HAJI YAACOB BIN MOHAMED AT OPENING OF PULAU AYER MERLIMAU JETTY IN JURONG

Covering Date: 15/07/1964

<http://www.nas.gov.sg/archivesonline/photographs/record-details/2b2fe2ab-1162-11e3-83d5-0050568939ad>

Training centres 28/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/292247451244591/>

Training, training and more training! As Lam Chun See posted a while ago, there were various institutes for specialised industrial training set up jointly between Singapore and another country in the early 1980s. These were:

- The German-Singapore Institute of Production Technology (est. in 1982 at 10 Science Road), to train production engineers.

- The Japan-Singapore Institute of Software Technology (est. in 1982 at Jalan Bukit Merah), to train computer professionals, e.g. analysts and programmers particularly to support automation and computerisation efforts.
- The French-Singapore Institute of Electro-Technology (est. in 1983 at 12 Science Road), to train technicians in electro-technology, electronics and automation.

These institutes typically involved Singapore supporting the land and building costs, while the partner country provided experts, trainers and equipment, and Singaporeans were also able to receive training in that country.

These and other training facilities, scholarships and schemes were crucial in the 1970s and 1980s as Singapore moved away from the earlier low-wage, labour-oriented manufacturing to capital-intensive industries that required higher technology and skilled workers.

Manpower development thus became a catchphrase and an important facet of the change.

Trainee using a lathe machine to work on a tool part during the official opening of German-Singapore Institute of Production Technology at 10 Science Centre Road in Jurong:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/ee2380b2-1161-11e3-83d5-0050568939ad>

Hugh Savage 26/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/291378737998129/>

I had a fascinating interview with Prof Lee Soo Ann yesterday, and one of the things I learnt was a new name in the economic history of Singapore: Hugh Savage, the organising secretary and superintendent of the Singapore Youth Sports Centre.

In 1958 Savage (apparently the father of geographer Victor) would lead a pilot industrial survey of Singapore. This survey provided the data for the study by Colombo Plan adviser F.J. Lyle on Singapore's economy, published the following year.

The Lyle report recommended 'economic union now, political union later', i.e. creation of the common market with Malaya, as well as an Industrial Promotion Board. Lyle called Savage's survey a 'Crusade' and commended him for his 'outstanding initiative and public-spiritedness' (Lyle Report). One thing revealed by the survey was the lack of cooperation and even suspicion between government and industry (see newspaper report below).

Of course 1958 was an important year – just before the general elections the following year.

When the PAP took power, it would inherit, adapt, reform, and expand many of the earlier colonial and Labour Front policies for industrialisation.

Prof Lee believed that the UNDP team led by Albert Winsemius would have read the Hugh report. But where is this report? I have not found it.

Forgotten man in history: (From left) Organising secretary of Singapore Youth Sports Centre Hugh Savage, Chief Minister Lim Yew Hock, Chairman of Appeal Committee of the centre Loke Wan Tho, and former Commissioner General Malcolm MacDonald at opening of the sports centre in old Kallang airport in 1956.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/b50432e2-1161-11e3-83d5-0050568939ad>

Lyle, F J. An industrial Development Programme. Singapore : Printed by Govt. Print., 1959.

Unfounded fears hamper govt. industry survey, The Straits Times, 21 September 1958, Page 4.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19580921-1.2.27>

IBRD report on the common market 24/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/290528758083127/>

The project that failed: the report of the study commissioned in 1962 by the International Bank for Reconstruction and Development on the common market between Singapore and Malaya.

The study team was led by Jacques Rueff, a French economist who was an advocate of the European economic union. Side note: Albert Winsemius had been asked to lead the team but had declined because he was too closely associated with Singapore.

The terms of reference for the mission were:

1. Examine the feasibility of economic cooperation between Singapore and Malaya, particularly the idea of a common market.
2. Recommend concrete steps that would facilitate the economic cooperation.
3. Propose administrative arrangements for better industrial cooperation.

Mainly the study took the first question as answered and concerned itself with practical matters in 2). It simply stated that it 'found no significant differences in the industrial promotion aims and policies of the territories'.

What was the difference between the Winsemius mission to Singapore and Rueff's on the common market? As far as can be seen, Rueff did not look closely into the politics of Singapore and Malaya. The IBRD report was concerned mainly with economic and fiscal matters such as tariffs and its overriding themes were cooperation and coordination.

Neither had Winsemius gone into political matters in his report but of course we now know that he was preoccupied with politics from the start and had eventually given political advice to Singapore: to retain the statue of Raffles and to remove the communists.

Source: Report on the Economic Aspects of Malaysia by a Mission of the International Bank for Reconstruction and Development under the chairmanship of Jacques Rueff. Singapore: Govt. Print. Off., 1963.

Construction workers 22 July 2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/289666508169352/>

A poster from 1983 to attract more Singaporeans into the construction industry, long shunned by locals and dominated by foreign workers. The previous year, the government had made the ambitious announcement that all foreign workers, including those in construction, would leave Singapore within a decade.

In 1984, a Construction Industry Training Centre was established to train skilled workers.

The same year, however, the government conceded that phasing out foreign workers from construction was unrealistic (the whole plan was dropped three years later).

Instead, there was a push to automate the industry and focus on skilled workers. Scholarships (with the promise of eventual permanent residency and citizenship) were offered to students from Hong Kong, Malaysia, South Korea, Macau, and Taiwan.

The history of foreign workers in industry and the attempts to attract more Singaporeans into construction and shipyards is very interesting for contemporary debates. This is not the first time Singapore has had such debates.

<http://www.nas.gov.sg/archivesonline/posters/record-details/30d561e3-115c-11e3-83d5-0050568939ad>

Lee Soo Ann 20/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/288755331593803/>
Book just arrived in the mail yesterday – second-hand all the way from 1973! Looks almost as good as new and I don't think it's been read.

I will be interviewing the author, the economist Professor Lee Soo Ann next week. What's remarkable about the book was the interest in international aspects of Singapore's industrialisation. Unlike most subsequent work that focused on the national factors, *Industrialisation in Singapore* discusses, among other things, the role of Albert Winsemius, the UN mission on iron and steel, the Japanese mission on Jurong (the report of which I have yet to find), and also two economic studies in the 1950s.

The work was transnational before the term became fashionable in academic circles. The other interesting thing is Lee's own experience. Prior to joining academia, he was Director of Projects at the Ministry of Finance at a crucial juncture of Singapore history – 1967-68 right after independence and when Singapore's economy was changing rapidly upon the British military withdrawal. Lee subsequently was on the boards of JTC, PSA and the National Productivity Board, as well as being adviser to several banks. So the interview would not only be with an academic, but also someone who's been directly involved in the economic and industrial history.

Looking forward to speaking to Prof Lee.

Colombo Plan 18/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/287802151689121/>
Another subtle instrument working quietly behind the scenes of Singapore's industrialisation was the Colombo Plan. Formed in 1950, the Plan involved the developing countries of Southeast and South Asia, including Singapore, and developed countries such as Australia, Britain and the US.

The Colombo Plan was originally envisaged as a version of the Marshall Plan: a 'bulwark against communism' through economic development rather than military means. The Plan held that the big obstacle to development was the lack of technical expertise and skilled personnel for development; the solution was human resource development.

The Plan was thus to be a form of 'self help' for developing countries to obtain technical assistance through regional cooperation. Thus it provided financial support (grants and scholarships) for civil servants and students from one country to receive training in another, while instructors and experts were sent to countries that required trainers and technical advice. We do not know yet the full history of the Colombo Plan in Singapore, how it contributed to industrialisation. But we know a few things. Singapore was a contributor as well as recipient, as most member states were. Singapore has hosted numerous conferences and seminars on technical cooperation and manpower training.

Many Singaporeans had also gone on overseas studies on Colombo Plan scholarships since the 1950s – in 1954, 19 Singapore students took up scholarships to study in Australia, who would serve in the Singapore City Council upon their graduation.

Colombo Plan graduates of the University of Newcastle between 1968-81 organised a reunion in 2010, an account of which was published in the book, *Memories: The Singapore Colombo Plan Scholars' Reunion Dinner 2010*.

SJI for example has a webpage on its Colombo Plan alumni: <http://www.sji.edu.sg/about-sji/roll-of-honour/colombo-plan-scholars>

Do you know any prominent Colombo Plan Scholars?

Another important aspect of the Colombo Plan's history was in organising study missions to Singapore. For instance, in 1964 a team of experts visited Singapore to study the possibility of introducing degree courses at the Singapore Polytechnic. Through the Plan, the Polytechnic also received machine tools from Australia, equipment from Canada, and books from Britain and New Zealand.

There is plenty of research to be done: there are numerous documents in the British and Australian archives, and also Education and Finance files in the Singapore archives.

Sources: *The Colombo Plan Story: 10 Years of Progress, 1951-1961*. The Colombo Plan Bureau.

'19 off to "Colombo" Training'. *The Straits Times*, 9 February 1954, Page 7.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19540209-1.2.89>

Industrial Research Unit 16/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/286849365117733/>

Being a researcher, I have been wanting to write a post on the "nerds" of industry – the guys of the Industrial Research Unit of the EDB. These were the people who did the research that made industrialisation possible.

The IRU was set up under the Technical Consultant Service when the EDB was formed in 1961. The idea for it was mooted by a Professor T.R. Pollard who visited Singapore and was based in a similar institute at the University of Canterbury, New Zealand; he became the first director of the Unit.

The New Zealand government made a large contribution of \$370,000 of research equipment to the IRU and also trained some of its early staff under the Colombo Plan.

The Unit's job was to carry out industrial research and provide technical advice to fledging industrialists – at a charge. Especially important was the work of testing and standardisation: to quality test raw materials and finished products, and to make sure that accurate standards were used in production.

Appropriately, in the 1960s the Unit was housed at the Prince Edwards campus of the Singapore Polytechnic where it utilised the latter's laboratories and workshops.

The "nerds" were engineers, physicists, chemists, and technicians, and some of the work they did include:

- Electrical engineering: testing of plugs, sockets, switches, electrical ranges, and transformers.
- Electronic: voltage and noise studies, and design, engineering and servicing of electronic equipment.
- Mechanical: testing of tension and weight processes, and microscopic study of metals.
- Chemical: testing of chemical processes for food and manufacturing industries.
- Temperature: testing of materials and apparatus in a temperature controlled room.

- Instruments: repair and calibration of mechanical and electrical instruments.

In 1969 the Unit was expanded into SISIR, the Singapore Institute of Standards and Industrial Research, an autonomous agency.

Source: EDB, The Industrial Research Unit. C. 1963.

Chartered Industries 15/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/286338085168861/>

The Chartered Industries of Singapore, formed in 1967, was the origins of what became the group of engineering-related industries under Singapore Technologies and presently ST Engineering.

CIS started as a mint and ammunitions plant and had a factory in Boon Lay. It is well-known for making the 5.56 mm ammunition round for the M-16/AR-15 rifle that generations of National Servicemen would train with.

The idea behind CIS was to support Singapore's defence and manufacturing industries, both of which became important in the late 1960s with the closing of the British military bases. Singapore would be able to manufacture its own munitions (Defence Minister Dr Goh Keng Swee envisaged the production of grenades and demolition equipment), create jobs, have knock-on effects on other local industries, and sell its products overseas (the first overseas order, interestingly, was from Switzerland).

Unfortunately there aren't many documentary sources available on the history of CIS in the National Archives or the libraries, but there are several issues of a bulletin it published in the early 1970s and a few oral history interviews.

In one of the interviews, Lai Chun Loong, a quality control engineer at CIS, recalled how he was told to strip an M-16 by Goh, and that only about 9 of the 100 odd pieces of the rifle were manufactured locally.

Oral history interview of Lai Chun Loong:

http://www.nas.gov.sg/archivesonline/oral_history_interviews/record-details/a0827711-1161-11e3-83d5-0050568939ad

Chartered Industries of Singapore Pte Ltd Bulletin. Vol. 1, no. 1 (Mar. 1971) - Vol. 3, no. 2 (Apr. 1974).

Commemorative publication: Chartered Industries of Singapore 15th Anniversary. Singapore: Chartered Industries of Singapore Private Limited, 1983.

Economic Survey 13/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/285411988594804/>

Did Singapore have an industrial history before 1959? This report titled Economic Survey: Singapore 1957, by Dr F.C. Benham, adviser to the Chief Minister, talks up Singapore's social and economic development in the mid-1950s.

In this story of progress, industry was a supporting character. The report focused on the need for more capital formation and government revenues to support development projects in the years to come. It did not say much about industry, although it highlighted the shortage of skilled and semi-skilled workers in the construction industry.

But placed prominently in the report were a few eye-catching photos of Singapore's industrial achievements.

A forgotten man in Singapore's history, Benham was also behind a number of committees on the revision of salaries of public service employees and cost of living allowances in Singapore, and on rubber policy and income tax in Malaya.

F.C. Benham. Economic Survey: Singapore 1957. Singapore: Govt. Print. Off. 1957.

Jurong 11/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/284335332035803/>

Some views of Jurong as a growing new town in the mid-1960s: factories of the light industries; behind them HDB flats for the workers; and primary school children at the playground as social amenities for families were built.

By then 4,600 flats had been built (1-, 2- and 3-room units), together with a children's playground, a primary school, 2 markets, a community centre, clinics, and over a hundred shops.

Source: Economic Development Board. The Jurong Story. 1967.

Light industries 10/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/283675938768409/>

Some amazing old photos of the electro-plating industry, nestled in the otherwise nondescript 1963 report of the Light Industries Services Unit of the EDB (formed the previous year to advise such industries).

Note the critical views expressed in the captions: the insanitary and disorganised conditions, the combining of work and cooking in a single space (a strict no-no in modern planning at the time).

These small/light/domestic industrial enterprises had grown up amid the entrepot trade, but they were soon to be remade as Singapore pursued a big industrialisation programme based on foreign capital investment and export manufacturing.

The 1963 EDB Annual Report on the work of the Light Industries Services Unit: 'The main emphasis is on expansion and modernisation of these small enterprises to fit them for their important role in the industrial complex', p. 32.

There is much to do to uncover the little histories of these small enterprises (in addition to the successful big industries).

Zoning of Jurong 8/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/282599235542746/>

A map from the 1964 EDB Annual Report, showing landuse in Jurong being planned for various kinds of industries (general, light, heavy, special), housing, a town centre, social amenities, and a green belt, in addition to Nanyang University which was built eight years ago.

The principle behind the landuse was 'zoning', where any plot of land would be given a specific use or function. This way of planning scientifically and 'from above' was common at the time and had come from Western planners to Singapore through the 1958 Master Plan.

Sing Huat 7/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/282060852263251/>

Juria Toramae, our project photographer, took these photos of Sing Huat Hardware and Machinery's industrial plant at Gul Circle, Jurong. It also has a shop at Jalan Besar.

Sing Huat is one of the oldest suppliers of industrial hardware in Singapore. The dates are a bit vague but the company was formed soon after the Second World War at Sungei Canal, selling refurbished tools and equipment. It grew alongside Singapore's industrialisation, and would establish further outlets in Jalan Besar and Jurong, as well as north of the causeway in Kuala Lumpur and Johor Bahru.

Today Sing Huat continues to produce tools and hardware for various industries such as ship repair, chemicals and petroleum, transport, and electronics.

Company history: <http://www.singhuat.com/index.php/about-us>

Jalan Besar office:

http://www.streetdirectory.com/stock_images/travel/business_normal/13285845330075/24592/90971/sing_huat_hardware__machinery_pte_ltd/

Guide on Singapore 1951 5/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/281127412356595/>

One of the early promotional publications for Singapore, the 1951 Guide to Singapore highlights the industries on our island to international readers. There is obviously a strong Malayan connection: rubber and tin – the two major exports of the peninsula – feature prominently in the book, such as Shum Yip Leong Rubber Works and Cressonite Industries, both manufacturers of rubber goods.

Also mentioned is the Singapore Harbour Board and the fledgling shipbuilding and ship-repair industry, and Diethelm's aluminium factory at Alexandra Road.

Here is a file from the Registry of Business at the National Archives of Singapore on Shum Yip Leong, which made the 'Tiger' brand of rubber products and hailed itself as 'Malaya's Leading Rubber Goods Manufacturer'.

Creating Agency: Registry of Businesses (ROB)

Record Series: Defunct Business Files

Record Reference Number: 8635

Record Title: SHUM YIP LEONG RUBBER WORKS

Record Date: 1947 - 1972

Microfilm Number - Blip Number: ROB 149

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Sembawang shipyard 4/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/280688005733869/>

Two photos from the book by *Melanie Chew, of Hearts and Minds: The Story of Sembawang Shipyard* (1996), to show how industrial history is also the history of Singapore.

1. Sembawang Shipyard in 1970, 'It was a sprawling yard, full of rubbish and flies. It was untidy'. The workers (most of them former naval dockyard workers) would experience first-hand how the shipyard became organised and disciplined, like the rest of Singapore.

2. 'Ship-repairing is a very basic repairing business...you overhaul propellers, and so on'. The repairing that went on in the yard, which we don't see, is conventional albeit on a larger scale.

JTC maps 3/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/280204132448923/>
Very useful maps from the 1975 Jurong Town Corporation Street Directory – gives more detail than the general street directory maps! Shows industries, flats, social amenities, and roads in Jurong.

Source: Jurong Town Corporation. *Street Directory*. Singapore: JTC, 1975.

Bonex Industries 1/7/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/279327429203260/>
It was really good to interview Lina Koh yesterday, who spent 20 years in accounts at Sanyo. What was as interesting was that Lina's first job as line tester at a toy company (Singapore's second, she reminds me) called Bonex Industries in Ayer Rajah Industrial Estate.

Lina joined Bonex in 1981 and enjoyed her work at the company, so it was a shock to her and her colleagues there when 300 employees in the company were suddenly retrenched. Two-thirds were daily rated production workers and the remainder were support staff. They were not unionised.

In January 1981, the company had already retrenched 20 workers, again without prior warning. They were not entitled to retrenchment benefits, which under the Employment Act required three years' service in a company, and Bonex had only been set up in 1979.

The company had suffered from falling orders from its European and American clients, and in September 1982, its parent company in Hong Kong closed down.

The other 3 toy companies in Singapore at the time were Aurora, Nikko and Shinsei.

300 lose their jobs as toy factory closes, *The Straits Times*, 1 September 1982:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19820901-1.2.41>

Electronic toy factory axes workers, *The Straits Times*, 14 January 1981:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19810114-1.2.66>

Job ad by Bonex, *The Straits Times*, 28 April 1980:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19800428-1.2.90.6>

Nantah graduates 30/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/278613882607948/>

What happened to the Nantah graduates of the 1960s and 1970s? Did they become Singapore's lost generation as employers increasingly favoured those who were English-educated? Historical and sociological research seems to suggest so (see references below).

Studies by the Economic Research Centre of the University of Singapore also point to Nantah graduates faring worse in the 1970s job market compared to the national average and to University of Singapore graduates in particular. A report in 1976 found that 'Compared to SU graduates, NU graduates waited longer for jobs, entertained fewer job offers and received lower wages'. A follow-up report surmised of the reasons: 'The most important ones are no work experience and no proficiency in English'.

Or did they, as suggested by Professor Hang Chang Chieh below, find alternative paths to success, working their way up in the manufacturing companies and becoming entrepreneurs? The truth is probably somewhere in between, and there is certainly a need to research the social history of Nantah, to find out the experiences and voices of Nantah graduates (and additionally also the graduates of the Ngee Ann Technical College, the predecessor to the current polytechnic, who would have faced similar problems).

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Singapore manufacturer 29/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/278093902659946/>
From the first issue of the Singapore Manufacturer in 1978, which shows adverts by various domestic and international industrial firms in Singapore, and some of the promotional activities for industry.

The biennial Singapore Manufacturer is jointly published by the Singapore Manufacturers' Association, the EDB and the Department of Trade.

Kaohsiung 28/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/277545562714780/>
The National Science and Technology museum in Kaohsiung houses an exhibition on the industrial history of Taiwan. Most of the industrial heritage discussed in the literature are in Europe and the US, so it is refreshing to see a case closer to our shores.

The exhibition aims to 'collect, preserve, maintain, and research the relics and documentations of Taiwan's industrial development history' (museum website). The exhibition covers the production of textiles, bicycles and computers (Acer!), among other things.

One notable point is that Taiwan embraces the Japanese colonial heritage, unlike most countries in the region.

In the Republican period, Kaohsiung developed as a major industrial centre in manufacturing and shipbuilding, as Taiwan emerged as one of the four Asian Tigers along with Singapore, South Korea and Hong Kong. These countries embarked successfully on export-led industrialisation instead of the mainstream policy of import substitution among developing

countries. The Asian Tigers were also known for having strong governments that played a leading role in development.

Official website (English):

<http://www.nstm.gov.tw/exhibition/english/exhibitionroom.aspx?KeyID=58a43b28-1259-4be4-a906-4b527f446475&floor=6>

(Mandarin): <http://industry.nstm.gov.tw/exhibition/exhibitionroom.aspx?KeyID=0d760d96-a968-4791-9d54-4d0109f7a286&floor=6>

1969 26/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/276468246155845/>

The take-off of Singapore's industrialisation in 1969, soon following independence and in the midst of the closure of British bases. Some statistics of note:

- A total of 437 industrial establishments in production, with 119 forthcoming.
- Twice as many establishments in Jurong industrial estate as in others combined.
- 110 establishments in metals and engineering, 57 in chemicals, 39 in textiles and in F&B, and 34 in electrical and electronics products.
- Jump in overall employment (selected industries) from 2,654 in 1963 to 46,761 in June 1969.
- Jump in employment in Jurong industrial estate from 90 in 1963 to 19,943 in June 1969.

The industrial developments resolved the much feared problem of unemployment and in fact Singapore now experienced a labour shortage and began employing Malaysian industrial and construction workers in the 1970s.

Source: Economic Research Division, EDB. 1969 Mid-Year Progress Report: Survey of Industries. EDB.

Amoy Canning 24/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/275570832912253/>

Amoy Canning (Singapore) is a good example of the commercial ties between Singapore and southeast China. It was established in 1951 (the Malayan branch in 1955) but the parent company was founded in Amoy in 1908.

In the 1970s, the company had a canning factory along Upper Bukit Timah Road near the Bukit Timah Fire Station. Its current address is in Bukit Batok.

Amoy Canning is well-known for the line of 'Amocan' products such as soya sauce (the original product of the company), and canned meat, curry chicken, vegetables, and soya bean.

The National Archives of Singapore has a file on the registration of the company:

Creating Agency: Registry of Companies (ROC)

Record Series: Defunct Company Files

Record Reference Number: ROC 986

Record Title: AMOY CANNING CORPORATION LIMITED

Record Date: 1949 - 1950

Microfilm Number - Blip Number: ROC 301

Conditions Governing Access: Registration is required to read, quote from and make copies of this file for private research. Copying for other purposes such as for online presentations, exhibitions or publications requires written permission.

GROUP PHOTOGRAPH TAKEN DURING TRIP ORGANISED BY PRIMARY PRODUCTION DEPARTMENT TO AMOY CANNING CORPORATION (SINGAPORE) LIMITED, 1960s:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/b8018f4e-1161-11e3-83d5-0050568939ad>

Amoy Canning website and history: <http://www.amocan.com/about-amocan>

Tuas flatted factories 23/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/275083252961011/>

A trip out to the factories at Tuas View Square that have been converted into migrant worker dormitories. The factories are mixed use, with production/business on the first floor and accommodation on the upper floors. The factory space has been converted into dormitory rooms, laundry areas, and resting areas. Generally the rooms look clean and well-maintained, including the toilets, but we only visited two dormitories.

The area is akin to a migrant worker town, and a recent Straits Times report claims there are over 5,000 workers living there (they work outside of the area). We saw names of Indian, Bangladeshi and Chinese workers. The report noted that there are inadequate recreational and sports facilities for them.

The history of the area is interesting. According to the report, the factories were converted into dormitories only five years ago. Before that, Singaporean and Malaysian workers used to work in them producing electronic parts and chemicals, before the factories moved overseas.

These are places, production work and historical changes that most of us don't get to see.

Straits Times report on the dormitories: <http://www.straitstimes.com/singapore/tuas-view-square-a-home-away-from-home-for-foreign-workers#sthash.SZAo60qb.dpuf>

Early industrial estates 22/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/274650546337615/>

A thought on SG200 from the point of view of industry and housing.

The earliest state-planned industrial sites in Singapore were managed by the Lands Division of the Singapore Improvement Trust, which built housing. In the mid-1950s, the Division began to build industrial sites on 6 acres of Trust land at Leng Kee Road in what was planned to become Alexandra Industrial Estate. This would be close to the Queenstown New Town, where the first neighbourhood Princess Estate was being built at the time.

These industrial sites were modest unlike the larger heavy industrial estates that came later (such as Jurong). The Leng Kee site was meant for 30-odd small factories and workshops. It was financed and developed by Malaya Developments Ltd, a subsidiary of the Colonial Development Corporation, while the SIT built roads and the City Council installed services for the factories. The Ministry of Commerce and Industry under the Labour Front government supported the project.

The industrial projects faced a major challenge in 1955, a year of numerous strikes, but subsequently industrial relations improved and small industrialists began to build projects at Leng Kee on 99-year leases.

These early industrial sites tell us 2 things: one, the link between housing and industry, and two, how the British projects were useful experiments that were continued and expanded by the postcolonial government.

The SIT also planned other industrial sites near its housing estates at Henderson, Tanglin Halt, Kallang, and Toa Payoh (a new town). In 1960, after the general elections the previous year, the Trust was abolished and replaced by the HDB.

Sources: Singapore Improvement Trust Annual Reports 1955-59. Photo from the 1956 report.

Asia Polyurethane Mfg Pte Ltd 21/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/274173113052025/>
Asia Polyurethane Manufacturing Pte Ltd is a family owned business that was established in 1985. Its website states that it was ‘the first fully equipped system house based in the ASEAN region to tailor Polyurethane systems to the needs of our customers’.

Nearly all of Asia Polyurethane’s business is in export. The company is located at 22 Tuas Crescent Singapore 638716.

Company website: http://apu.com.sg/?page_id=7

What is polyurethane? <http://www.wisegeek.org/what-is-polyurethane.htm>

Photos by taken on a quiet weekend.

Fussy workers 20/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/273707379765265/>
There was a lot of one-sided criticism of local workers – including female workers – in the press. This 1978 report was named, ‘Our fussy workers’. Presenting only the perspectives of garments and electronics employers, the article complained about the job-hopping Singaporean girl.

The typical girl, the report claimed, was ‘flippant’ and ‘frivolous’. They would ‘walk in every day to give them [the factories] the once over - and walk out again two hours later, the next day or the next week for the smallest of reasons’.

The report felt that the girls were less disciplined than boys their age who had undergone National Service training. It concluded: ‘Factory workers never had it so good - if only they could just turn up for work and stay’.

It makes one wonder, what would a balanced article look like, if it had also considered the views of the workers themselves?

We should also note that such criticisms were taking place when Singapore was getting uncomfortable with the large numbers of foreign workers coming into the country.

OUR FUSSY FACTORY WORKERS...The Straits Times, 18 June 1978, Page 12

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19780618-1.2.84>

UNDP 18/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/272852986517371/>

Albert Winsemius advised Singapore well on industrialisation in the 1960s but he wasn't the only technical expert who came here. He came through the UN Development Programme, which played a big role in development throughout the world.

In Singapore, as the attachments below show, between 1950 and 1985 the UN provided technical assistance of various sorts: by supporting project costs totalling \$27 million, sending 744 experts to Singapore (the largest number in the 1970s), and offering 2,029 fellowships to Singaporeans (especially from 1979 onwards).

In development, Singapore needed not so much monetary aid or grants, but technical expertise – the know-how and skills to do things.

(The other well-known international technical assistance programme was the Colombo Plan, launched in 1950. Singapore was also actively involved in it.)

The UN's industrial projects were:

- The Winsemius-led mission in 1960-1961 on the feasibility of industrialisation in Singapore.
- Supporting the work of the Singapore Institute of Standards and Industrial Research, a part of EDB which provided consultant technical service to investors.
- Supporting the work of the National Productivity Board.

Besides industry, the UN also provided technical expertise to Singapore's education, urban renewal, hotels and catering, transport (study of the MRT), and agriculture.

What's also interesting was that Singapore made some (lesser) contribution to development in other countries, sending out 66 experts and offering 653 fellowships, even in the early years of industrialisation.

Source: Chow Kit Boey, Chew Moh Leen, Elizabeth Su, One partnership in development: UNDP and Singapore. Singapore: United Nations Association of Singapore, 1989.

Spain 16/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/271862636616406/>

Does industrial heritage matter? To take an example from Spain, whose economy (like Singapore's in some respects) changed from industry to services in the 1980s. Such deindustrialisation not only caused manufacturing industries, factories and jobs to disappear, but also pushed industrial communities, cities and regions into decline.

Thus industrial heritage is not only about 'history' or 'nostalgia', but is also a pragmatic effort to rejuvenate places and peoples left out as history 'moved on'. It is cultural but also social and economic.

In the 1990s, Spain began to look into preserving its industrial heritage. At the time, beginning in Britain, industrial heritage was becoming more appreciated in the Western world.

International organisations such as the International Council on Monuments and Sites, the UN Educational, Scientific and Cultural Organisation, and the International Committee for the Conservation of the Industrial Heritage also supported industrial heritage.

Industrial heritage is not necessarily opposed to change. In 2000, Spain launched its National Industrial Heritage Plan. It aimed not only to preserve the past, but also to rejuvenate the depressed economies and communities of former industrial areas.

Former mines, metalworks and mills have been converted into museums, tourist attractions and housing. Although many efforts have failed, some have succeeded, such as the Batán-Museum in Val de San Lorenzo, and the Colònies del Llobregat Fluvial Park in Catalonia. The successful ones have drawn upon the combined efforts of institutions, academics and local communities.

The Colònies del Llobregat Fluvial Park project:

<http://www.catalunya.com/parc-fluvial-del-llobregat-17-16003-508?language=en>

Source: P.B. del Pozo and P.A. Gonzales, 'Industrial Heritage and Place Identity in Spain: From Monuments to Landscapes', *Geographical Review*, 102, 2012: 446-464.

A Malaysian worker 15/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/271368209999182/>

One of the nicer articles on Malaysian workers in the 1970s and 1980s – most reports were on issues, such as Malaysians who died by misadventure or were convicted for crimes, or how there were too many Malaysian and other foreign workers in Singapore.

But this article interviews quality-control operator K. Malathy, who worked in an electronics factory in Toa Payoh (Fairchild?) and lived in a one-room hostel nearby, sharing with other foreign workers (Thais in her case).

Malathy talks about her work and her living in Singapore, her dreams coming here, her feelings about the city and its people, showing that there is a person behind the statistics on migrant workers and debates about migrant worker policy in the 1970s and 1980s.

There is a history to be written of the workplace, and of the migrant workers.

'Every day we go to work: Punch card, sit in place and start operating the machines. And as the hand works, the mind works, too. It moves far, far away, busy with the secret dream'.

'Most of us seem to be slightly out of touch with our Singapore cousins. The Singaporean seems to us such a smooth, confident person. He knows what he wants, he knows where he is going'.

Fairchild factory (opened in 1969): Toa Payoh's fairy-tale-like castle

<https://thelongwindingroad.wordpress.com/tag/fairchild-factory/>

A Malaysian worker here, *The Straits Times*, 10 August 1981:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19810810-1.2.95.22.1>

Woh Hup 13/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/270265513442785/>

Woh Hup is another old Singapore company (90 this year), founded in 1927 by Yong Yit Lin. Before the Second World War, the construction company built Clifford Pier (1933) and Changi Prison (1936), and after the war, the Telecommunications Authority of Singapore Exchange at Orchard Road (1969), Golden Mile Complex (1974), and World Trade Centre (1980).

In 1933, the company made a bid to build four additional wards for the Mental Hospital in Yio Chu Kang, but was unsuccessful.

Yong Yit Lin (杨溢麟), a Hakka who arrived in Singapore in 1913, worked initially as a tin miner, carpenter and carpenter. He became the President of the Singapore Chinese Chamber of Commerce in 1948-1949.

Today Woh Hup is still a family-run business in its 3rd generation.

The iconic 16-storey Golden Mile Complex, a mixed use commercial and residential development, is popular with Thais, in particular the Thai workers who made up part of Singapore's migrant labour force as we recruited workers from 'non-traditional' sources beyond Malaysia in the late 1970s.

Photo by Horst Kiechle: https://c1.staticflickr.com/2/1046/5160856442_1e7260a06c_b.jpg
'90 and still going strong: Family-run construction firm Woh Hup':

<http://www.straitstimes.com/business/companies-markets/building-a-strong-future-on-a-proud-heritage>

EDB Founded 12/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/269830133486323/>

The Economic Development Board was formed in 1961, replacing the short-lived Industrial Promotion Board. It aimed to make a concerted effort to tackle two pressing issues of the time: create jobs for the growing population and transform the economy from entrepot trade to manufacturing.

The EDB's first Chairman was Hon Sui Sen, Perm-Sec of the Ministry of Finance, and its Director was E.J. Meyer, an industrial planner recruited from Israel.

The EDB's Board comprised persons from various fields which would impact the industrialisation programme:

- Lim Kim San, Chairman of the Housing and Development Board (housing).
- Lien Ying Chow, Managing Director of the Overseas Union Bank (banking).
- Lim Chew Swee, Deputy Chairman of the Singapore Manufacturers' Association and Managing Director of Timber Industries (manufacturing).
- Runme Shaw, Managing Director of Shaw Brothers (commercial).
- G. Kandasamy, trade union leader (labour).
- F.C. Yap, accountant (professional and academic).

Thus industrialisation involved not only economic matters but also housing and labour policies and the support of the private sector and professional circles.

Already in 1961, the EDB began to implement the proposals of the UN industrial survey team led by Albert Winsemius, e.g. to persuade local businessmen to invest in the list of feasible industries Winsemius had drawn up.

MEN NAMED TO PUSH STORE INDUSTRY BID, The Straits Times, 17 August 1961,
Page 1:

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19610817-1.2.5>

Garments and electronics factories 11/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/269411206861549/>

No two factories were the same. It seems, according to this 1976 newspaper article, working in an electronics factory was more attractive to Singaporeans than in a garments factory, with the majority of garments recruits leaving within a few months.

For instance, electronics factories offered a fixed pay and better working conditions (garments workers were paid by piece), while they were usually located closer to one's home. In the article, Richard Lee, MD of Great Malaysia Manufacturing Company Pte Ltd (opened in 1967), tried to debunk the myth, saying that garments work was more interesting since the worker did all aspects of the work, whereas electronics workers were part of a production line repeating the same task. He added that garments work also requires plenty of skill and training.

Do you agree?

FACTORY OF GREAT MALAYSIA TEXTILE MANUFACTURING COMPANY
LIMITED AT TANGLIN HALT TAKEN DURING ITS OPENING

<http://www.nas.gov.sg/archivesonline/photographs/record-details/cc92671d-1161-11e3-83d5-0050568939ad>

Why job hunters shun garments, New Nation, 23 June 1976, Page 4

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19760623-1.2.20>

JYM Pillay 10/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/268849116917758/>

Listening keenly to JYM Pillay at my Albert Winsemius talk. Pillay joined the EDB soon after it was formed in 1960 and was among the pioneer group of civil servants involved in Singapore's industrialisation efforts.

I know him best from my research on the work of the Bases Economic Conversion Department, now mostly forgotten, but which was an inter-ministerial unit established to manage the conversion of British military facilities and lands to commercial or public use in the late 1960s and 1970s.

The BECD helped to convert the Singapore naval dockyard at Sembawang into a commercial shipyard and organise job retraining for former base workers, especially clerical workers, among other things.

The accelerated British military pullout from Singapore thus, in an indirect way, provided a big boost to Singapore's industrialisation, and Pillay played an important role in it.

Nice write-up on Pillay's career at Infopedia:

http://eresources.nlb.gov.sg/infopedia/articles/SIP_659_2005-01-06.html

Housing 9/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/268338096968860/>

At my talk on Albert Winsemius at The Head Foundation on Wednesday, a few members of the audience asked about the role of housing in Singapore's industrialisation. Which brings up the question, was industrialisation a matter of economics and finance, or did it also involve social and political policies such as housing?

Winsemius supported the HDB's public housing programme, as did Singapore's leaders and civil servants. As he explained, HDB flats were not only low-cost homes for the working population, but also 'gave the impression that we were making progress' – a symbol of

progress to visitors to Singapore that the country was not 'going down the drain'. For Singaporeans, as PM Lee Kuan Yew had said, the HDB flat would give them a vital stake in the country.

Winsemius spoke to the pioneer builders of the HDB programme when he first arrived in Singapore in 1960-1961, such as Howe Yoon Chong and Lim Kim San. Howe was confident that the HDB could build 18,000 flats a year.

This would be a pivotal moment in Singapore history: the State Development Plan of 1961, shaped by Winsemius' crash programme for industrialisation, gave massive support to the HDB's 1st 5-Year Plan. The Board received \$150 million out of a \$870 million budget to erect over 50,000 units of flats over the next 5 years. The HDB's early efforts had stalled but would be hugely revitalised with the emergency housing programme subsequent to the great Bukit Ho Swee fire of May 1961, which left 16,000 people homeless. Winsemius left Singapore that month, aware that a major boost was also forthcoming to Singapore's industrialisation.

Victims of the catastrophic 1961 fire wait for the arrival of Prime Minister Lee Kuan Yew, who will officially open the first flats completed in Bukit Ho Swee Estate, built over the fire site.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/ba035737-1161-11e3-83d5-0050568939ad>

Industrial Promotion Board 8/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/267921563677180/>
Before the EDB there was the short-lived and much maligned Industrial Promotion Board, which only lasted two years before the 1959 elections happened and the EDB was established the year after. The IPB had a miniscule revolving fund of \$1 million (the EDB's budget was \$100 million), of which the IPB managed to dispense only \$243,000 to industries. It still adhered to the import substitution model of industrialisation.

Nevertheless as the pioneer 'promotion board' of Singapore, there are some interesting similarities and continuities between the IPB and what the EDB did more expansively later on. The IPB was modestly dealing with factory sites (including industrial estates), foreign investors, and industrial research (including drawing up a list of industries that would be feasible in Singapore). It also noted the problem of protective tariffs in Malaya and of industries in Singapore moving to the Federation.

It's always useful to see how pioneers and predecessors influenced successors in one way or another, rather than to merely view the first to be inferior to the latter ones.

SINGAPORE CONSTITUTION EXPOSITION AT KALLANG (1959) - VISITORS AT SINGAPORE INDUSTRIAL PROMOTION BOARD PAVILION

<http://www.nas.gov.sg/archivesonline/photographs/record-details/62bbf68f-1162-11e3-83d5-0050568939ad>

Sin Cheong 7/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/267432537059416/>
Sin Cheong Containers started off as a tin factory in 1935, at the tail end of the Great Depression in Singapore. Initially it recycled tin cans and then experienced, and survived, the

travails of the Japanese Occupation. Sin Cheong is interesting also because it was established before Singapore's industrialisation efforts after the Second World War, but would actively participate in and support the industrialisation programme in the 1960s and 1970s. In 1963, the company was incorporated as Sin Cheong Containers Manufacturing Company Pte Ltd and subsequently opened a factory at Ho Puay Quay in Havelock. In 1973, it would move to its present location at 6 Gul Drive in Jurong.

GUESTS TOUR FACTORY OF SIN CHEONG CONTAINERS MANUFACTURING COMPANY LTD AT HO PUAY QUAY, OFF HAVELOCK ROAD, DURING ITS OPENING:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/c20b2e07-1161-11e3-83d5-0050568939ad>

Company history: <http://www.sincheong.com.sg/>

Contract workers 6/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/266926497110020/>

Contract, or 'odd-job', workers played a big role in the shipyard and construction industries. They did casual, project-based and seasonal work that was common to these industries, and were naturally Singaporeans rather than foreigners.

While it suited the nature of production in the industries, contract work was also disadvantageous to the workers. As the newspaper article below points out, contract workers did not receive adequate labour protection or job security.

But there is also another side to the history of contract workers: many of them embrace the life and routine of casual work. As one worker interviewed by a student researcher said, he accepted the culture of 'one day working, one day idling'.

My father was an odd-job worker in the shipyard industry and I accompanied him – he dragged me – to work during my school vacations. It took him two decades to save enough CPF to buy a flat in Yishun.

Student research: Maria Koh Siew Hiang, The contract labour system and the odd-job labourers in Singapore, academic exercise, Dept. of Sociology, Faculty of Arts & Social Sciences, National University of Singapore, 1988.

CONSTRUCTION PLOTS BESIDE WESTIN STAMFORD, STILL UNDER CONSTRUCTION, 1984:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/a0c6defe-1162-11e3-83d5-0050568939ad>

Contract labour needs organised protection, The Straits Times, 15 February 1975, Page 17, <http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19750215-1.2.87.2>

Texas Instruments 5/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/266388120497191/>

The establishment of Texas Instruments in 1969, which the press lauded as a '50 day wonder'. TI, one of the biggest manufacturers of semiconductors in the world, opened a factory in the Kallang Basin. It soon employed over a thousand workers, mostly female, including both Singaporeans and Malaysians.

The photo below shows the women at work on the opening day of the factory. They are separated into groups according to their tasks – interestingly, workers seemed to prefer repetitive work on a single task rather than completing the whole task.

What is not known shown in the picture? Sounds in the factory that helped beat the boredom – music being played and the women chatting, joking and gossiping with one another.

It was not all rosy though – the closed-up work eight hours a week often strained the eyes.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/ceeec579-1161-11e3-83d5-0050568939ad>

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19690223-1.2.4>

Winsemius 3/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/265494247253245/>

Winsemius, before his first visit in 1960, saw Singapore as a unique challenge for industrialisation: ‘she was neither an underdeveloped, nor a half-developed or a highly developed country’. His prior experience was mostly in small countries like the Netherlands (his homeland). How did he overcome this difficulty? At my talk coming Wednesday:

<https://www.gevme.com/winsemius-20170607>

Common market 2/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/265051667297503/>

One of the early hopes for industrialisation was the common market with Malaysia which would be much larger than the Singapore market for industrial products. But it turned out to be quite a nightmare. Since Singapore was part of Malaysia between 1963 and 1965, multinational companies wanting to obtain Pioneer Certificates and establish factories in Singapore had to seek approval from the Federation government. As Chan Chin Bock of the Economic Development Board explained, the Malaysians dragged their feet: ‘During those two years, the Central Government in KL approved only 2 PCs; we probably sent about 100, so we had a success rate of about 2% during those two years’.

The irony, Chan added, was that although that was a period of Confrontation between the governments of Indonesia and Malaysia, Indonesian industrialists did more than the Malaysians to support Singapore’s early industrialisation efforts. They contacted the EDB and helped fund industrial ventures such as National Iron and Steel.

Interview with Chan Chin Bock at National Archives of Singapore:

http://www.nas.gov.sg/archivesonline/viewer?uuiid=abbea54e-115e-11e3-83d5-0050568939ad-OHC002715_001

Flatted factories 1/6/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/264538997348770/>
Flatted factories: industrial version of the shophouse?

JTC ad for flatted factory rentals in the 1970s and 1980s, close to the housing estates and new towns that were springing up.

<http://www.nas.gov.sg/archivesonline/posters/record-details/b61fa5e4-2ea4-11e4-859c-0050568939ad>

JTC plans to ‘bring jobs to people’ at Bedok.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/biztimes19790727-1.2.50>

Lam Soon 30/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/263610340774969/>

Beauty soap and Lam Soon, another local pioneer industry. The company was formed in 1950 to trade in copra and canned food, before opening a factory to manufacture cooking oil and laundry soap in Jalan Jurong Kechil.

In 1963, when Singapore was part of Malaysia, Lam Soon received pioneer status to manufacture beauty soap, toilet soap and translucent soap, utilising, as the Minister for Finance Dr Goh Keng Swee said, the most modern techniques in Malaysia. Goh urged other Singaporean industrialists to be as enterprising as Lam Soon.

A brief history of Lam Soon: http://www.lamsoongroup.com/abtus_history.asp

Dr Goh's speech at the opening Lam Soon Oil And Soap Singapore:

http://www.nas.gov.sg/archivesonline/audiovisual_records/record-details/4ce228f7-1164-11e3-83d5-0050568939ad

Photo from <http://www.celestechoo.com/2014/03/lam-soon-introduces-total-hygiene-care.html>

Shift work 28/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/262800847522585/>

Much of Singapore's industrialisation happened at night when most people were asleep.

Below is the story of Devi Nair, a female Malaysian worker married to a Singaporean.

Employed at a HP electronics factory at Depot Road in the mid-1980s, she worked the 'third shift', starting work at 11 pm and finishing at 7 am.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19860622-1.2.68.10.1>

Phase out foreign workers by 1992 27/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/262268584242478/>

One interesting thing I have found so far in Singapore's industrial history is we were never completely comfortable with using foreign workers in the 1970s and 1980s. The political leaders, media and academics were anxious about the socio-economic implications of relying on a foreign workforce.

I was surprised to learn, for instance, that in 1982 Prime Minister Lee Kuan Yew had set a 10-year target to phase out all foreign workers, including those in shipyards and construction. By 1991, all workers in Singapore would be local; although the caveat was that some of the locals would be foreigners with skills who would be offered permanent residency and eventually citizenship.

The plan did not work obviously and within a few years the government would concede we could not remove all foreign workers. But it shows a common belief in the 1970s and 1980s that recruiting a foreign workforce would be a temporary measure.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19820101-1.2.2>

Lorong Fatimah 26/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/261869654282371/>

Industrial estates were usually built in new towns or HDB estates which provided the workforce for the factories. However, in some cases the workers came from nearby kampongs. One example was Lorong Fatimah in Woodlands, whose residents historically were fishermen and boatmen but later worked in Senoko and Kranji industrial estates. This tells us that Singapore's kampongs, even rural ones, were modern, not backward, and connected to the industrial economy.

In 1989 the villagers of Lorong Fatimah were resettled in HDB estates like in Woodlands.

<https://remembersingapore.org/2012/04/04/from-villages-to-flats-part-1/>

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newpaper19890606-1.2.5.10>

SIS 23/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/260641611071842/>

There's an interesting but also important story behind the founding of SIS (formerly Sugar Industry of Singapore) in 1967. SIS remains the only sugar refinery in Singapore and the Economic Development Board (EDB)'s proposal to establish it was questioned by the Minister for Finance, Dr Goh Keng Swee. Lim Ho Hup, director of EDB, tells us the story in his oral history interview:

'One or two years later, the factory was nearly ready to go into production. We had bought our raw materials, such as the raw sugar. The raw sugar became the really important part of the argument.

I got a call from the minister [Goh Keng Swee]. "Ho Hup, what are you people doing promoting an industry like this? You know the price of raw sugar is higher than the price of refined sugar?"...

I did not know what to say...I didn't know whether he was right or wrong. I said, "Okay, can you let me study this?"

Two days later, I replied, "Minister, it's not just me working on this. I have a whole team behind me studying the project." I didn't say, "You may be a brilliant economist, but you do not know everything. Not even I can know everything." In Hokkien, we say, "u hang bo chee"...

Of course, I prepared my ground. I talked to Mr Hon [Sui Sen, Chairman of EDB] first and got his support. I couldn't fight two superiors at one time, one was bad enough!...The critical thing to say was that raw sugar was more expensive than refined sugar only for a few days in a year, when the volume of transaction was either nil or very small. Very few people dared to contradict him like that.

He asked, "What do you people think?"

I said, "I think we should let them go on."

"Okay, okay!"

I liked him! He probably found me difficult to deal with. He also had a very funny face and I think many people were frightened of him'.

Interview (with transcript):

http://www.nas.gov.sg/archivesonline/oral_history_interviews/record-details/7fb0d4de-1160-11e3-83d5-0050568939ad

SIS's brief history: <http://sissugar.com/about-sis/>

Flatted Factory 115 Commonwealth Drive 22/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/260211877781482/>
Nice write-up on a slice of our industrial heritage. Will be going to the factory to interview the old occupants.

<http://www.channelnewsasia.com/news/singapore/the-flatted-factory-that-made-history-inside-115-commonwealth-8752052>

Sembawang Shipyard 20/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/259313687871301/>
Work abuzz at Sembawang Shipyard. Want to get closer next time!

The immigrant workers 19/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/258714747931195/>
When Singapore reopened its doors to Malaysians in 1970 in order to meet the labour shortage for industrial workers, a debate sprang up almost immediately in the media over the merits of the policy. While no one denied the economic benefits, there was concern over whether the migrant workers would create, or face, problems in Singapore.

The other interesting point about the debate, which carried on into the 1980s, was that almost everyone then accepted that the use of migrant workers would be a short-term measure, and in the long run Singapore would have to find other solutions, be it to encourage more women to work or to reduce the stigma towards blue-collar work.

It's useful to read history because these questions are very much with us today.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/newnation19711102-1.2.51.1>

Jurong Shipyard 18/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/258316087971061/>
How different Jurong Shipyard looked then! Prime Minister Lee Kuan Yew (centre) touring the shipyard in 1965, with Hon Sui Sen, chairman of the Economic Development Board, to his left.

PS. I always find it interesting the kids who manage to appear at the edges of these old photos.

<http://www.nas.gov.sg/archivesonline/photographs/record-details/641eb2bc-1162-11e3-83d5-0050568939ad>

Jurong Shipyard eight years ago: <http://www.panoramio.com/photo/20152725>

Malaysian workers 17/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/257920991343904/>
Did you know that Malaysian workers played an important role in Singapore's early industrialisation?

In 1967, when the British announced they would close their military bases within four years, we started to limit the employment of Malaysians so that Singapore citizens could obtain work. However, by 1970 Singapore faced a labour shortage, particularly in the manufacturing sector, and adopted an open-door policy towards Malaysian workers. There was great demand for workers for a range of professional, skilled, semi-skilled, and unskilled jobs across the garments, shipbuilding and repair, electronics, and construction industries.

The newspaper report covers Jurong Shipyard's mass training scheme, where a pioneer batch of 200 fresh school leavers from Malaysia took up technician courses at Pasir Panjang Vocational Institute. They would later serve a five-year bond at the shipyard, after which they would be eligible to become permanent residents.

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19710727-1.2.60>

Bus companies 15/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/257148391421164/>

Quick quiz:

In 1969, which SIX bus companies served Jurong Industrial Estate?

Answer in the newspaper article but don't look!

<http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19690807-1.2.73>

Pinned 14/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/256629704806366/>

Stay awhile and remember. This group documents the history, heritage and memory of Singapore's industrialisation.

Drop us a note here or pm me to share your memories - did you work in an industrial estate or shop, and what was your pay? Do you remember the flatted factories, construction sites and shipyards? Do you have old photos?

Below: women apprentices at Sembawang Shipyard in the 70s, from M. Chew, of Hearts and Minds: The Story of Sembawang Shipyard.

Jurong Hill 2 13/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/256178724851464/>

You may know that many dignitaries (and some less dignified ones – see if you can spot them in the photos below!) were invited to view the fledging Jurong Industrial Estate atop Jurong Hill. But what does this really mean, is it a part of our history?

Singapore in the 1960s and 1970s was a showcase nation. In the beginning especially, the public display of industrialising, building flatted factories, and erecting HDB flats was as important as the physical and economic activity. It was necessary to have prominent international people, and Singaporeans, see the modern replacing the old – farms, kampongs, swamps, and idle land. In addition to tree-planting by visitors, photographs, films, radio and TV broadcasts captured and demonstrated the transformation of Singapore. This is the cultural history of Singapore's development.

What Jurong Hill also shows is that Singapore's industrialisation, too, is international history, which is often not recognised. Besides the foreign dignitaries, UN technical experts advised the Singapore government (Winsemius is the most well-known one among many). The EDB set up offices in the US and UK to carry out promotional work on investing in Singapore. Opportune because many Western and Japanese multinationals were moving offshore for cheaper factory sites and labour in those years.

Jurong Hill 12/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/255590338243636/>

Jurong Hill (formerly Bukit Peropok, just behind entrance to Jurong Bird Park) played an interesting role in Singapore's industrialisation. There is a heritage marker on the hill and another for Jurong Port and Jurong Shipyard, both of which you can see from a high vantage point up on the hill's tower, opened by the Minister for Social Affairs, the late Othman Wok, in 1970.

Besides the port and shipyard, you can see three offshore islands: Samulun, Damar Laut and of course the large Jurong Island.

Read more about the hill: <https://roots.sg/learn/resources/Videos/Eye-in-the-sky-Jurong-Hill-Lookout-Tower>

To be continued.

Jurong Industrial Estate 11/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/255047264964610/>

Lo and behold away from the big new malls, I stumbled on part of the Jurong Heritage Trail at Jurong East yesterday. At 6 pm this area was occupied by relaxing teens and migrant workers, probably not very aware of the history in their midst! The trail marks the history of Jurong Industrial Estate.

I particularly like people's oral history interviews, such as the Malay fishermen who lived in Jurong before the estate was built, and workers going to work in pirate taxis in the early days. Note this was at Jurong East, so you get a sense of the size of Jurong Industrial Estate. The trail spans from Clementi to Joo Koon.

Have a look if you have the time. It's more interesting than the malls!

You can download the trail booklet here:

<https://roots.sg/visit/trails/jurong-heritage-trail>

OG 10/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/254586018344068/>

Did you know OG departmental store started off as a homegrown garments business called Ocean Garments? It was one of Singapore's early pioneer industries, establishing a factory in Redhill Industrial Estate in 1963.

Ocean Garments was one of many applicants for sites in Redhill that year, and garments was one of Singapore's major industries in the 1960s and 1970s before the shift to hi-tech industries later.

A brief write-up on OG's origins:

'A home-grown retailer in women's fashion since the 1960s, OG Department Store is a family-run business that started out as Ocean Garments in September 1962. It operated a factory located in the Redhill Industrial Estate, which was officially opened by then Finance Minister Goh Keng Swee in January 1963.[1] The company was a successful applicant under the Pioneer Industries Scheme implemented by the government to encourage foreign investments in Singapore. The company's patriarch-founder, China-born Tay Tee Peng, arrived in Singapore in 1958 after having lived in Indonesia for 25 years.[2]'

Source: <http://eresources.nlb.gov.sg/history/events/0eca5422-b76d-4cbf-b807-1534b43d3a61>

Photo from National Archives of Singapore:

<http://www.nas.gov.sg/archivesonline/photographs/record-details/bacda9d7-1161-11e3-83d5-0050568939ad>

Map of Jurong Industrial Estate 9/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/254173748385295/>

Map showing factories in Jurong Industrial Estate (more detailed than the previous one I posted but still doesn't show all the factories).

Source: Survey & Planning Unit, Industrial Estates Division, Jurong Directory, 1968.

Float by National Iron and Steel Mills 7/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/253366451799358/>

Float by National Iron and Steel Mills at a milestone event - the National Day celebration of the 150th anniversary of the founding of Singapore in 1969. In 2 years' time, we will be reaching 200!

Map of Jurong Industrial Estate 6/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/252926345176702/>
Industrial estates in Singapore and factories in Jurong Industrial Estate, mid-1960s.

Source: The Jurong Industrial Estate, Present Pattern and Future Prospects by Tao-chang Chiang. Singapore, Institute of Southeast Asia, Nanyang University, 1969.

UN report 3/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/251617911974212/>

Very excited to delve into the UN files on setting up an iron and steel plant in Singapore in the early 1960s. In November 1959, Minister for Finance Goh Keng Swee had submitted a request to the UN to fund a preliminary feasibility study for such a plant. Some of the salient points from this submission:

- This was not the first time such a proposal had been made. The submission drew upon an earlier study in 1954 by the IBRD (International Bank for Reconstruction and Development) on the economic development of Malaya, which had been less optimistic about such a project, but circumstances had since changed.
- Singapore worked closely with the UN, which provided technical expertise. The UN ECAFE (Economic Commission for Asia and the Far East) was already interested in studying the establishment of an iron and steel plant in Asia.
- The project had another regional and international dimension: the iron ore for the plant would come from Malaya, the coal from Sumatra, and technical expertise and financial assistance from Japan.
- Steel production would not only serve the Singapore market, which would be small, and thus a protective tariff was not advisable.

May Day 1/5/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/250796725389664/>

On Labour Day, an ode to the female coolies who helped build the Singapore Naval Base, c.1936.

In the background is the Naval Base cinema.

Photo from Of Hearts & Minds: The Story of Sembawang Shipyard (1998).

Retraining 27/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/248909978911672/>

Job retraining is a motif of Singapore history, but rarely studied.

One of the earliest episodes of retraining en masse took place in the late 1960s and early 1970s, when Singapore had just become independent and many white-collar workers - including academic teachers - were retrained to acquire technical skills and take up industrial jobs.

I spoke to Lim Mengjock, who joined the Singapore Naval Base in 1964 as an accounts clerk and was retrenched in 1968 when the British bases were being shut down. He underwent two technical drawing courses to become a tracer, but was able to get an administrative job as a billing technician in Sembawang Shipyard.

Job retraining is not easy.

General Leather 25/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/248059785663358/>

Still on the UN archives. Alex Tan Tiong Hee, my fellow investigator for the industrial heritage project, had told me briefly about his father (Tan Yeok Seong)'s industrial ventures in the 1960s which were supported by the EDB. One of them, Malaysia Leather, had been established partly on the recommendations of an UN expert, Dr Ernest Gergely. The venture was, however, a failure.

Was browsing through my UN files and was thrilled to come across one titled, Leather Industry Singapore. It contained a progress report on the leather industry by Gergely. So it had been on my computer all along :)

Alex will be reading the report to triangulate with his knowledge and memories of Malaysia leather, and we can further discern the role of UN experts in the difficult days of industrialisation in the 1960s.

National Iron and Steel UN team 24/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/247566305712706/>

We all know that Albert Winsemius led an UN mission to Singapore in 1960-61. But not many of us knew that there was another mission that came to Singapore in 1961 - the one that carried out a survey on steel manufacturing which contributed to the eventual establishment of National Iron and Steel. (In fact the Winsemius team was expressly told not to touch heavy industry).

Thanks to the UN archives which are now open in New York, the history of NatSteel can now be more comprehensively researched and understood - we can see how the survey team of experts and the UN worked with Singapore policymakers and civil servants in the industrialisation programme.

My Old Photos of Naval Base 20/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/245570262578977/>
from various former British base workers who kindly shared their memories and mementos with me.

British withdrawal 19/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/244922485977088/>
Industrialisation transformed people's way of life. Seven years ago, I interviewed over 80 former workers who used to work and live in the 1960s in what was known as 'Little Britain' or 'Kochul Kerala' (depending on your perspective) - the British military bases of Singapore. To many of them and their parents, even though Singapore had become independent and the fate of the bases had long been debated by the policymakers, the sun would not set on the British empire. The life of an employee - clerk, technician or labourer - was relatively simple and leisurely.

As Lim Mengjock told me, his father was a fitter at the Sembawang Naval Base whose family resided at Delhi Road - one of several roads inside the base where quarters for Asian employees were located. His father would cycle to work at 8 am, cycle home for lunch before returning to his workplace, and come home for the day at 4.30 pm. 'The life of a servant of the British empire'.

But of course the sun did set in the late 1960s.

Photograph by Santha Sreedharan

The story of the conversion of Sembawang dockyard to commercial shipyard is part of Theatres of History and Memory, a research project on the history of Singapore's industrialisation.

Pls share your memories!

Winsemius 18/4/2017

<https://www.facebook.com/groups/singaporeindustrialheritage/permalink/244329682703035/>
Albert Winsemius, the Dutch economist, came to Singapore in 1960 on a UN technical assistance mission. Over the next two decades, he advised the government on Singapore's industrialisation programme. He would make many useful policy recommendations, both economic and social.

Having observed workers repairing cars and bicycles on his first visit, Winsemius had little doubt that Singapore would succeed in industrialising. He felt that the country's 'greatest asset is the high aptitude of her people to work in manufacturing industries. They can rank among the best factory workers in the world'.

Here is Winsemius' first team to Singapore (he wasn't very pleased with the expertise of some of the members and returned soon with an improved second team).

Group abstract 18/4/2017

Industry—in terms of both economic production and hard work (our own and the nation's)—is very much part of Singapore history. Our rapid industrialisation in the 1970s transformed our economy and our way of life. These momentous changes constitute, borrowing from

historian Raphael Samuel, “theatres of history and memory”. But in Singapore, industrial heritage is not well-appreciated.

Theatres of History and Memory is both a documentation and participatory research project. It uncovers Singapore’s industrial history in the 20th century, as shaped variously by the hands of political leaders, civil servants, international organisations, economic experts, entrepreneurs, managers, supervisors, communities, families, and workers.

The project is especially interested in manufacturing industries between 1900 and 1980s:

- Prewar light industries connected to the entrepot trade.
- Various factories in Jurong Industrial Estate.
- National Iron and Steel.
- Sembawang Shipyard.
- The construction industry.

Just as importantly, Theatres of History and Memory invites people to participate in the research. More than other forms of heritage, and because many industrial sites no longer exist, industrial heritage involves people’s experiences and memories.

We ask Singaporeans and foreigners who have worked in Singapore to contact us and share:

- Memories and feelings of work: what sort of work did you do? How was the work structured? What machinery did you operate? What sorts of relationships did you form? How did your work support your family and company?
- Historical sources and artefacts: your photographs, work tools, personal notes, punch cards, identity passes, work permits, official documents, letters of commendation etc.
- Blog posts on your experiences and memories, and conversations with family, friends and former colleagues.
- Thoughts on how industrial heritage may be developed and presented.

Contact: Dr Loh Kah Seng lohkahseng@chroniclesresearch.com

Theatres of History and Memory (2017-2018) is funded by a National Heritage Board Heritage Research Grant and administered by the Economic Growth Centre (EGC) of Nanyang Technological University (NTU). It is led by a research team comprising Dr Loh Kah Seng and Mr Alex Tan Tiong Hee (both of Chronicles Research and Education), Dr Koh Keng We (NTU), and Dr James Ang (EGC). Public contributions such as sources and interviews will form part of the research material for the project.