

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
1st batch (1983)			
1 Lim Chin Siang	19/1/84	31/3/84	NHK Colour TV Engineering course Industrial Attachment to Sony and Matsushita
2 Kathiravelu	12/2/84	22/4/84	Core & MST Elective
3 Goh Soo Cheng			Core & MST Elective
4 Wong Wai Nam			Core & MST Elective
5 Winston Teow	12/2/84	22/4/84	Core & MST Elective
6 Ong Kin Wee			Core & MST Elective
7 Joyce Lim			Core & MST Elective
8 Philomena Chieng			Core & MST Elective
9 Judith Choo			Core & MST Elective
10 Vivien Seah			Core & MST Elective
11 Clement Franklin			Core & LMR Elective
12 Wong Tuck Wah			Core & LMR Elective
13 Low Bee Leng			Core & LMR Elective
14 Lillian Lee			Core & LMR Elective
15 Gan See Siong			Core & LMR Elective
16 Andre Lim			Core & LMR Elective
17 Aileen Liu			Core & LMR Elective
18 Jeffrey Yap			Core & LMR Elective
19 Tan Kheok Juay			Core & LMR Elective
20 Stephen Sng			Core & LMR Elective
21 Low Hock Meng			Core & LMR Elective
22 Woo Yuen Hong			Core & LMR Elective
23 Leow Peng Kui (NTUC) (External)			Core & LMR Elective
24 Mary Loh (R)			Core & LMR Elective

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
1st batch (1983)			
25 Violet Seah (R)	12/2/84	22/4/84	Core & MST
26 Hoon Teng Sin (R)			Core & MST
27 Eunice Wong (R)			Core & MST
28 Arun Rengasamy (R)			Core & MST
29 Yu Shi Huey (R)			Core & MST
30 Ong Siew Eng (R)			Core & MST
31 Ong Teck Huat (R)			Core & LMR
32 James Law (R)			Core & MST Elective
33 Doris Tay (R)			Core & MST Elective
34 Seow Phaik Ean (R)	12/2/84	22/4/84	Core & Elective
35 David Koh (R)	30/9/83	25/10/83	Observation of Health Week in Japan
36 Ng Kiat Chong (R)	4/3/84	10/3/84	Productivity Development
37 Daniel Ee (R)	4/3/84	10/3/84	Productivity Development
38 Ang Keng Hong (R)	4/3/84	10/3/84	Productivity Development

Key : R = Resigned

	Name of officer	PDP Fellowship Attachment		Area/Programme
		Date From	Date to	
	2nd batch (1984)			
1	Phillip Tan Eng Fong (RC)	16/7/84	20/11/84) NHK Colour TV Engineering) course Industrial Attachment) to Sony and Matsushita
2	Rosely Othman (RC)	17/1/85	25/4/85	
3	Joan Lim Whee Neo (RC)	17/1/85	25/04/85) NHK Educational TV Programme) course)
4	Tan Siew Yang (RC)	30/7/84 30/7/84	17/11/84	
5	Winston Yew (OSH)	31/10/84	27/12/84	MRT Construction
6	Liau You Hin (OSH)	10/10/84	30/10/84	OSH Fellowship & PDP Core and IMR Elective Programme
7	Molly Woo (OSH) (Png Seok Oon)	10/10/84	21/01/85	OSH Fellowship & PDP Core and IMR Elective Programme
8	Patrick Lee Cheng Chuen	28/2/85	15/05/85	Petrochemical and OSH for metal-working industry
9	Chew Whye			Core & IMR Elective
10	Zainal Abdin			Core & IMR Elective
11	Yeo Jue Nam			Core & IMR Elective
12	Wee Yue Chew			Core & IMR Elective
13	Darshan Singh			Core & IMR Elective
14	Lim Bea Fung			Core & IMR Elective
15	Cheung Yan Hong			Core & IMR Elective
16	George Yeo			Core & IMR Elective
17	Helene Kwong			Core & IMR Elective
18	Lee Kia Yoke			Core & IMR Elective

Key : RC = Resource Centre

OSH = Occupational Safety & Health

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
2nd batch (1984)			
19 Foo Check Teck	10/10/84	20/1/85	Core & LMR Elective
20 Aleth Yenko			Core & LMR Elective
21 Chew Bee Choo (R)			Core & LMR Elective
22 Irene Koh (R)			Core & LMR Elective
23 Connie Goh (R)			Core & LMR Elective
24 David Wee			Core & MSD Elective
25 Lim Chea Ngo			Core & MSD Elective
26 Cheng Ai Jong			Core & MSD Elective
27 Lucy Poon			Core & MSD Elective
28 Choo Lee Heng			Core & MSD Elective
29 Irene Yap (R)			Core & MSD Elective
30 Bernard Poon (R)	16/7/84	3/11/84	NHK Colour TV Engineering course Industrial Attachment to Sony, Matsushita
Boon Ping			
31 Michael Lowe	10/10/84	21/01/85	Productivity Development
32 Quek Cheong Wah			Productivity Development
33 Lynn Khoo Li Yin			Productivity Development

Key : R = Resigned

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
3rd batch (1985)			
1 Low Choo Tuck	7/9/85	21/12/85	Core and Elective Programme
2 Lee Peng Hon	7/9/85	21/12/85	Core and Elective Programme
3 Lily Chong	7/9/85	21/12/85	Core and Elective Programme
4 Lam Chun See	7/9/85	21/12/85	Core and Elective Programme
5 Magdelaine Chin	7/9/85	21/12/85	Core and Elective Programme
6 Mok Shau Ping	7/9/85	21/12/85	Core and Elective Programme
7 Paul Sum	7/9/85	21/12/85	Core and Elective Programme
8 Lim Lai Soon	7/9/85	21/12/85	Core and Elective Programme
9 Na Boon Chong	7/9/85	21/12/85	Core and Elective Programme
10 George Tan	7/9/85	21/12/85	Core and Elective Programme
11 Peter Lee (R)			Core and Elective Programme
12 Tan Boo Hock (R)			Core Programme only
13 Siew Chen Siew	7/9/85	7/10/85	Core Programme only
14 Chia Yew Heng			Core Programme only
15 Foong Swee Yu			Core Programme only
16 Low Yoke Kam (R)			Core Programme only
17 Ng Kim Lian (R)			Core Programme only
18 Chan Chee Pang (R)	7/09/85	29/10/85	Core Programme only
19 Cheong Kok Wai (R)	7/09/85	29/10/85	Core Programme only
20 Tan Kheok Juay	7/10/85	21/12/85	Elective Programme only
21 Low Hock Meng			Elective Programme only
22 Goh Lay Hong (R)			Elective Programme only

Key : R = Resigned

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
3rd batch			
23 Toh Tuck Yan	7/09/85	21/12/85	Core and Elective Programme
24 Phua Sin Lian	28/07/85	25/11/85	NHK Colour TV Engineering
25 William Wong	21/01/85	18/05/86	NHK Colour TV Engineering
26 Tham Yuen Han	21/01/85	22/04/86	Educational TV Production

Name of officer	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
4th batch (1986)			
1 Danny Lam	8/8/86	8/11/86	Management Consultancy course
2 Quek Cheow Wah	8/8/86	8/11/86	Management Consultancy course
3 Wong Wai Nam	8/8/86	8/11/86	Management Consultancy course
4 George Yeo	8/8/86	8/11/86	Management Consultancy course
<u>External Consultant</u>			
5 Chan Weng Ng	8/8/86	8/11/86	Management consultancy course
6 Chua Giok Pien	8/8/86	8/11/86	Management consultancy course
7 Chew Kwang Ah, Adrian	8/8/86	8/11/86	Management consultancy course
8 Goh Chor Cheng	8/8/86	8/11/86	Management consultancy course
9 Goh Hin Tiang	8/8/86	8/11/86	Management consultancy course
10 Goh Khing Chong	8/8/86	8/11/86	Management consultancy course
11 Suhaimi Salleh	8/8/86	8/11/86	Management consultancy course
12 Loo Leong Hoon	8/8/86	8/11/86	Management consultancy course
13 Ho Fong Leng, Angelina	8/8/86	8/11/86	Management consultancy course
14 Yee Chee Wah	8/8/86	8/11/86	Management consultancy course
15 Sum Yee Loong	8/8/86	8/11/86	Management consultancy course
16 Tan Kee Sing, Jay	8/8/86	8/11/86	Management consultancy course
17 Woon Kin Chung	24/11/86	19/12/86	Individual Attachment: to study company level promotion/productivity development
18 Han Liang Swee (RC)	3/8/86	6/11/86	NHK Educational TV Production course
19 Alan Lee Fong Wah (RC)	19/1/87	25/3/87	NHK Educational TV Production course

Key : RC = Resource Centre

Name of officer 4th batch (1986)	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
20 Koh Woan Ling	28/2/87	6/6/87	Okinawa International Centre Group Training course in AV Technology
21 Ng Hang Kwang (RC)	19/1/87	1/5/87	NHK Colour TV Engineering course Industrial Attachment to Sony and Matsushita
22 Jason Low Eng Poh(RC)	19/1/87	1/5/87	
23 Glenda Leong	16/1/87	12/2/87	Industrial Attachment:In-house Library Automation
24 Low Choo Tuck	18/5/87	10/6/87	Management Consultancy Course
25 Quek Ser Khoon	1/2/87	1/3/87	Machinery Guarding & Safety in the Use of Robotics
26 Wong Peng Hong	25/5/86	9/6/86	OSH Industrial Hygiene
27 Wan Tong Wah	15/5/86	5/11/86	OSH Zero Accident Programme

Key : RC = Resource Centre

Name of officer 5th batch (1987)	PDP Fellowship Attachment		Area/Programme
	Date From	Date to	
1 Tom Cheong	10/8/87	17/11/87	Production Management Course
2 Zainal Abidin	10/8/87	17/11/87 *	Personnel Management Course
3 Tan Han Eng	10/8/87	17/11/87	Personnel Management Course
External			
1 Choo Kia Pew	10/8/87	12/11/87	Personnel Management Course
2 Amarjeet Singh Bajwa			Personnel Management Course
3 Lee Seok Cheng			Personnel Management Course
4 Lauw Cheng Ho			Personnel Management Course
5 Wong Kian Kok			Personnel Management Course
6 Yong Hin Yao, Francis			Personnel Management Course
7 Kuo Wen Teh			Production Management Course
8 Wong Sum Chai			Production Management Course
9 See Geok Chio			Production Management Course
10 Tan Fook Chai			Production Management Course
11 Lim Kian Chew, Daniel			Production Management Course
12 Tan Wui Keng, Andrew			Production Management Course
13 Woo Kwok Khow, Peter			Production Management Course
14 Mah Bow Tan	12/7/87	21/7/87	Karuizawa Top Management
15 Lam Chuan Leong	12/7/87	18/7/87	Seminar (Sr Mgt Devt Prog)
16 Choy Chan Pong	25/5/87	9/6/87	OSH Training & Promotion Prog
17 Ang Tick Bing	23/11/87	20/12/87	& Facilities in Japan Shipyard Safety

Total No. of staff sent for NPB : 144
 Total No. of staff resigned : 26
 Percentage resigned : 18.05%

* Zainal was attached to the Korea Productivity Centre from 12 - 17 Nov 87

MATRIX OF ASSISTING METHOD & FIELD

FIELD METHOD	i MSD	ii LMR	iii QCC	iv IE & QC	v & TQC	vi RC	vii & AV Technology	viii Productivity Measurement	ix OSH	x SMEs (Mfrg)	xi Consultancy
PRACTICAL GUIDANCE	III	III	III	III	III	II	II	III	III	II	II
DEVELOPMENT OF TRAINING MATERIALS	III	III	III	III	III	III	III	III	III	III	III
MODEL COMPANY & PILOT COMPANY PROJECTS	III	III	III	II	II	NA	NA	III	NA	III	III
AV TECHNOLOGY & PROGRAMME PRODUCTION	NA	NA	NA	NA	NA	II	II	NA	NA	NA	NA
SEMINARS/ WORKSHOPS	III	III	III	III	III	NA	NA	III	III	II	II
DEVELOPMENT OF FRAME WORK FOR EFFECTIVE IMPLEMENTATION	NA	NA	NA	II	II	NA	NA	NA	NA	NA	NA
TRAINING OF STAFF	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA
CONCLUSIONS	III	III	III	II	II	II	II	III	II	II	II

SUMMARY OF EVALUATION

Field	Conclusions	Evaluation I II III
MANAGEMENT SUPERVISORY DEVELOPMENT	Technology transfer in this field had generally been completed.	III
LABOUR MANAGEMENT RELATIONS	Technology transfer in this field has been completed in terms of disseminating of Japanese knowledge and assistance in system design. Practical assistance in implementing FWS and gainsharing in companies would be required in conjunction with management guidance projects in the extended phase.	III
QCC (QC CIRCLE ACTIVITIES)	The QCC Movement had gained momentum and had expanded its scope from when it was first launched in 1982. QC Circle activities in Singapore are no longer limited to the company level but had extended to events organised at the national and international levels. Singapore is able to take the initiative to develop its own policies on the continuation and assimilation of QCC activities. The transfer of expertise from Japan in this area through PDP is considered successful.	III
INDUSTRIAL & OPERATIONS ENGINEERING AND TQC	<p>A considerable quantity of materials have been developed. The basic foundation/knowledge has been laid. Several companies have also been assisted through direct assistance involving both NPB counterparts and PDP experts.</p> <p>For the future more intensive follow-up activities and a more integrated approach to Productivity Improvement through Basics, Practical, TQC, JIT and TPM will be adopted. As a first step towards Integrated Productivity Improvement, working taskforces have been set up. The purpose of the task forces is to enhance practical technology transfer. The LTEs have identified 2 phases for the duration of the task force.</p> <ul style="list-style-type: none"> - Phase I is for technology transfer until Jun 88 - Phase II is for future development and developing experience through consultancy and in-house education and training. Closely related and relevant to these activities is "Integrated Management Consultancy" and more assistance in the field of Integrated Productivity Improvement (IPI) is required. 	III

SUMMARY OF EVALUATION

Field	Conclusions	Evaluation I II III
RESOURCE CENTRE & AV TECHNOLOGY	<p>The development of a viable framework is important to implement IOE/TQC in Singapore. In the beginning stages, the IOE/TQC concept was disseminated widely through conferences, seminars and also setting up of task forces to study issues of IOE/TQC in Singapore. In order to elaborate and develop the application of Integrated Productivity Improvement system to meet Singapore manufacturing industries, assistance and advice from experts will still be required.</p> <p>In summary, guidance and assistance provided by LTES & STEs have enabled the RC to produce seminars, documentaries, training and corporate video programs competently. However, further assistance is needed in the production of stand-alone interactive videos, drama & variety type programs as well as maintenance of 3rd phase equipment.</p>	<p>II</p> <p>II</p>
PRODUCTIVITY MEASUREMENT	<p>NPB has through the PDP absorbed the expertise of the value-added method as a measure of the company's productivity and developed their own method of measuring and analysing productivity at company and industry level. For the next phase, NPB would need other measures such as non-value-added method to measure the productivity of a specific operation and of the company for the purpose of management guidance projects in the establishment of flexible wage system and management planning & control system.</p>	<p>III</p>
OCCUPATIONAL SAFETY & HEALTH	<p>On the whole, the transfer of technology in the area of OSH under the PDP had been highly successful. Further assistance, however, would be required in Safety Management, Foremen and New Worker Training, OSH Exhibition, Industrial Hygiene Laboratory, ZAM, Press and Construction Machinery Inspection.</p>	<p>II</p>

SUMMARY OF EVALUATION

Field	Conclusions	Evaluation I II III
<p>MANAGEMENT CONSULTANCY & SMALL AND MEDIUM ENTERPRISES (SMES)</p>	<p>With assistance under FDP, NPB had performed well and made marked progress in the area of management guidance extended to SMEs. All along NPB had been concentrating on companies mainly in the manufacturing sector.</p> <p>NPB thus strived to gear up and expand its services to the commerce and service sectors to help them in their productivity improvements not only through the application of IE, productivity measurement techniques and productivity schemes but also through discipline and proper work attitudes.</p> <p>It was well acknowledged that Japan has developed a sound reputation for improving service productivity. Expertise from Japan is requested for NPB to upgrade the productivity of Singapore's service industry.</p> <p>NPB also planned to extend its services to help bigger companies which require assistance in productivity related areas as it was found that some local non-SME were managed and ran like SMEs. It was common to find that these companies were confronted with productivity and efficiency problems but did not possess the expertise to tackle them.</p>	<p>I II III</p> <p>II</p>

MANAGEMENT SUPERVISORY DEVELOPMENT

Fields, Contents & Evaluation Item	Management Supervisory Development	Evaluation I II III
1 Practical Guidance and Assistance	<p>1. When conducting training courses developed by PDP, the PDP training manuals were used in the courses pertinent to Productivity Facilitators, Productivity Induction, QCC Facilitators, Leaders and Members, LMR Joint Consultation, Export Marketing and Management Consultancy. Many parts of the manuals have been extracted to be utilised in many courses developed by NPB.</p> <p>2. NPB staff have conducted most of the above courses developed by the Japanese experts.</p>	<p>III</p>
2 Development of Training Materials	<p>In this field, most of the training materials developed under Phase I & II of PDP Grant Aid have been developed completely.</p>	<p>III</p>
3 Model Company Project	<p>At present stage, some follow-up should be required in the areas of supervisor training on OJT in generic skills development for workers. However, NPB can do this follow-up work.</p>	<p>III</p>
4 Seminars/Workshops	<p>Various Seminars and Workshops on MSD issues were conducted by LTES/STEs.</p>	<p>III</p>
5 Conclusions	<p>PDP manuals, in the broad sense, could be utilised in the new courses developed according to the new training needs. It can be said that the technology transfer in this field has generally been completed.</p>	<p>III</p>

LABOUR MANAGEMENT RELATIONS

Fields, Contents & Evaluation Item	Labour Management Relations	Evaluation I II III
1 Practical Guidance and Assistance	<ol style="list-style-type: none"> 1. Dissemination of Japanese experiences in LMR have been completed through training courses, workshops, etc. 2. In the area of participative management, small group activities and QCC activities have been well organised by NPB. Number of circles, or participation of circles have already reached the level of that in Japan, and still are increasing by NPB's efforts. 	<p style="text-align: center;">III</p> <p style="text-align: center;">III</p>
2 Development of Training Materials	<ol style="list-style-type: none"> 1. Most of the training materials in this field have been completed and well transferred to NPB. 2. Cases for FWS and gainsharing are under development by the cooperation between NPB and LTES /STEs. It could be completed within this FY 87. 3. LMR game is under development and will be completed by Jun 88. 	<p style="text-align: center;">III</p> <p style="text-align: center;">III</p> <p style="text-align: center;">III</p>
3 Model Company Project	<ol style="list-style-type: none"> 1. Starting from the promotion of QCC activities in the model companies, overall shopfloor productivity improvement were developed and successfully implemented in FY 86. 2. Through SNEF and JCCI direct assistance were provided to companies. Cases development could be completed within this FY87. 	<p style="text-align: center;">III</p> <p style="text-align: center;">III</p>
4 Seminar/Workshop	<p>Seminars/Workshops were conducted by LTES and STEs on the various aspects of LMR.</p>	<p style="text-align: center;">III</p>
5 Conclusions	<p>Technology transfer in this field has been completed in terms of dissemination of Japanese knowledge and assistance in system design. Practical assistance in implementing FWS and gainsharing in companies would be required in conjunctions with the management guidance projects in the extended phase.</p>	<p style="text-align: center;">III</p>

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	QCC (QC Circle Activities)	Evaluation
1 Practical Guidance and Assistance	<p>1. Guidance from LTES/STEs were provided in the following areas :</p> <p>a) Specific procedures from the introduction to the assimilation of QCC activities</p> <p>b) Education and training methods on basic techniques of problem solving</p> <p>c) Linkage between safety/health and QCC</p> <p>d) Information on and analysis of successful cases of QCC activities in Japan</p> <p>2. <u>Programme & events organised with advice from LTES/STEs</u></p> <p>IEQCC, QCC Club, QCC college, QCC clinic, QCC forum, QCC seminar, QCC convention. The number of QC Circles registered with the National Registration Centre had increased from 44 in 1982 to 5760 in Jan 88.</p> <p>3. <u>QCC advisory service</u></p> <p>QCC advisory service was provided to companies to promote QCC.</p> <p>PDP experts submitted various recommendations and reports to NPB as reference materials.</p>	<p>I II III</p> <p>III</p> <p>III</p> <p>III</p> <p>III</p>
2 Development of Training Materials	<p>Training materials developed by LTES/STEs include :</p> <p>1) The seven tools of QCC</p> <p>2) The new seven tools of QCC</p> <p>3) How to conduct QCC activities</p> <p>* Easy-to-understand training materials were prepared and inducted a condensed outline of old and new Japanese QC techniques and QC Circle management. Original materials for use in collective live-in training were also developed.</p> <p>Materials developed by counterpart with advice from LTES/STEs</p> <p>1) QCC handbook</p> <p>2) QCC kit</p>	<p>III</p>

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	QCC (QC Circle Activities)	Evaluation I II III
3 Seminars/Workshops	<p>LTEs/STEs visited over a hundred companies and provided guidance and advice on the introduction and management of QCC.</p> <p>LTEs/STEs gave guidance on methods for developing QCC activities to over 7,000 participants in live-in seminars, QCC top management seminars, QCC camp etc.</p>	<p>III</p>
4 Preparation of Papers Reports	<p>More than 30 papers on QCC were prepared by LTEs/STEs and submitted for reference to NPB.</p>	<p>III</p>
5 Training of NPB Staff	<p>On-the-job experience provided within corporate training programmes through MASTERS Programme</p>	<p>III</p>
6 Conclusions	<p>The QCC Movement had gained momentum and had expanded its scope from when it was first launched in 1982. QC Circle activities in Singapore are no longer limited to the company level but extend to events organised at the national and international levels. Singapore is able to take the initiative to develop its own policies on the continuation and assimilation of QCC activities. The transfer of expertise from Japan in this area through PDP is considered successful.</p>	<p>III</p>

INDUSTRIAL ENGINEERING, QUALITY CONTROL & TOTAL QUALITY CONTROL

Item	Fields of Evaluation	Industrial Engineering, Quality Control & Total Quality Control	Evaluation I II III
1 Training		<p>In-House Training programmes on IOE, 5 'S', JIT, TPM and TQC were conducted for companies. NPB staff's basic foundation/knowledge of these areas has been laid through the training sessions. Knowledge acquired is presently being enhanced through working task forces, practical application and conduct of workshop/seminars/company assistance programs with guidance and assistance from LTEs.</p> <p>The follow up action required is to develop more suitable courses for companies.</p>	<p>II</p>
2 Development of Training Materials		<p>Training Materials developed comprised :</p> <ol style="list-style-type: none"> 1) Case Studies 2) Reports and Papers 3) Filmstrips, VTRs 4) Course Materials <p>These materials would be properly arranged in the specific corner for the effective utilisation in promotion and training of such integrated productivity improvement concepts and techniques.</p>	<p>III</p>
3 Model Company Project		<p>Under the Model Company Project initiated by team of LTEs, companies were identified as models of productivity improvement for others to emulate. Several companies in the field of IOE/TQC were established. Various companies were initiated into taking up IOE/TQC improvement concepts and techniques and were regularly monitored and assisted under NPB's Model Company/Advisory/MQC Clinic Services.</p> <p>The follow up action required is to implement integrated productivity improvement in companies.</p>	<p>III</p>
4 Seminars/Workshops		<p>Specific IOE concepts techniques were disseminated through training/seminars/workshops/conference/dialogues. A number of NPB staff could now conduct these training/workshops by themselves.</p> <p>LTEs/STEs participated actively in 5 'S', Practical IE, JIT, TPM and TQC Workshops/Seminars to promote correct understanding of these concepts and techniques by managers of both private and public sectors. Talks were conducted not only for NPB but also for SISIR and other organisations related to TQC.</p>	<p>II</p> <p>III</p> <p>III</p>

INDUSTRIAL ENGINEERING, QUALITY CONTROL & TOTAL QUALITY CONTROL

Fields of Evaluation Item	Industrial Engineering, Quality Control & Total Quality Control	Evaluation I II III
<p>5 Development of a Framework for Effective IOE Improvement Techniques</p>	<p>Task forces were set up to assist the completion of technology transfer in IOE/TQC in Singapore and make recommendations for the follow up actions.</p> <p>Following this, the later stages concentrated on building up information on more specific areas of IOE/TQC, like Value Engineering, Zero Defects, Plant Maintenance, Shopfloor improvement techniques, Cost Reduction, Material Requirement Planning, Just-In-Time, TQC, TPM, Rapid tool setting. Courses were developed to educate the public on these specific IOE/TQC concepts and techniques. At the same time, LTEs and STEs provided Advisory Services/Clinics to selected companies.</p> <p>The next phase of IOE/TQC is to have a more integrated approach to Productivity Improvement through the various aspects including TQC, JIT and TPM. Assistance and advice from LTEs and STEs in these areas will be required.</p>	<p>II</p> <p>II</p> <p>II</p>
<p>6 Conclusions</p>	<p>A considerable quantity of materials have been developed. The basic foundation/knowledge has been laid. Several companies have also been assisted through direct assistance involving both NPB counterparts and PDP experts. NPB trainers participated with LTEs/STEs in conducting workshops.</p> <p>For the future, more intensive follow-up activities and a more integrated approach to Productivity Improvement through Basics, Practical IOE, TQC, JIT and TPM will be adopted. As a first step towards Integrated Productivity Improvement, working taskforces have been set up. The purpose of the task forces is to enhance practical technology transfer. The LTEs have identified 2 phases for the duration of the task force.</p> <ul style="list-style-type: none"> - Phase I is for technology transfer until Jun 88 - Phase II is for future development and developing experience through consultancy and in-house education and training. Closely related and relevant to these activities is "Integrated Management Consultancy" and more assistance in the field of Integrated Productivity Improvement (IPI) is required. 	


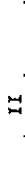
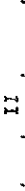
INDUSTRIAL ENGINEERING, QUALITY CONTROL & TOTAL QUALITY CONTROL

Item	Fields of Evaluation	Evaluation I II III
	<p>Industrial Engineering, Quality Control & Total Quality Control</p> <p>The development of a viable framework is important to implement IOE/TQC in Singapore. In the beginning stages, the IOE/TQC concept was disseminated widely through conferences, seminars and also setting up of task forces to study issues of IOE/TQC in Singapore. In order to elaborate and develop the application of Integrated Productivity Improvement system to meet Singapore manufacturing industries, assistance and advice from experts will still be required.</p>	<p>I II III</p> <p>II</p>

EVALUATION OF TECHNOLOGY BY FIELD RESOURCE CENTRE & AV TECHNOLOGY

Fields of Evaluation Items	Resource Centre & AV Technology	Evaluation I II III
<p>i Practical Guidance and Assistance</p>	<p>Through the guidance and assistance of LTEs and STEs, the producers were able to produce seminar and documentary programs competently. They have also begun to learn the necessary skills in the production of training programs, role play programs and variety type programs. More time will be needed to transfer expertise on stand-alone interactive training videos, drama and variety type programs.</p> <p>Training of RC staff was conducted by STEs & LTEs to supplement what they had learnt through on-the-job training.</p> <p>Training on 1st Phase Equipment had been completed and it laid the foundation for the current work of the RC.</p> <p>Training on 3rd Phase Equipment :</p> <p>Basic operational training given by suppliers. More advanced operational training was given by team of LTEs and STEs. However, more time will be needed to transfer expertise on 3rd Phase equipment, in particular, camera work, audio recording and dubbing, maintenance for cameras, editors, switchers and effects machines.</p> <p>i Camerawork : Further training for technicians required in the area of camerawork to improve overall production capability of RC.</p> <p>ii Audio Recording and Dubbing : RC has so far been concentrating on the video aspects of video production. There is now a need to pay more attention to the audio aspects. Further training will be required to enable RC staff to use sophisticated audio equipment effectively such as 1-inch audio recording and playback units.</p> <p>iii Maintenance - more intensive training on the maintenance of all 3rd Phase equipment - Cameras, VTR, Switchers, Effects Machines, Video Editors & Video Monitors are needed.</p>	<p>I II III</p> <p>II</p>

EVALUATION OF TECHNOLOGY BY FIELD RESOURCE CENTRE & AV TECHNOLOGY

Item	Fields of Evaluation	Resource Centre & AV Technology	Evaluation I II III
2	Development of Training Materials	<p>Relevant papers and training materials on RC were prepared by PDP experts. Manuals produced by STEs include :</p> <ol style="list-style-type: none"> 1) Manuals on studio operation and programme production 2) Manuals on operation and maintenance of RC equipment 3) Manual on Video Production 4) Report on Role of Art in Video 5) Manual on Education Broadcasting 6) Manual on Camera Work and Lighting 7) Manual on Lighting 8) Manual on Digital Video Effect 9) Manual on How to Make a Role Play Programme 10) Manual on Lighting Principles and Lighting Special Effects 	
3	AV Technology	<p>STEs conducted counterpart training and seminars/workshops to transfer basic knowledge of AV Technology to NPB staff.</p> <p>Topics covered include :</p> <ol style="list-style-type: none"> 1) What is AV Technology ? 2) Selection and Appropriate use of AV Materials 3) Useware of OHP 4) Role of Video in Education 5) Graphics <p>The expertise will have to be transferred in the application of AV technology for the production of training materials.</p>	
4	Programme Production	<p>Experts advised and assisted in production of video programmes. As at Feb 88, 357 video programmes have been produced by RC. In general, production quality of programs produced have improved. Programs produced by RC were used for training (used to support training activities in NPB and training activities of external organisations) and promotion (ie. programs were produced to disseminate productivity information, programs produced for companies were used to enhance corporate communication or to introduce productivity schemes eg. QCC).</p>	

EVALUATION OF TECHNOLOGY BY FIELD RESOURCE CENTRE & AV TECHNOLOGY

Item	Fields of Evaluation	Resource Centre & AV Technology	Evaluation I II III
5 Resource Library		<p>Collection was expanded with the arrival of 34 manuals, 3234 volumes of books (including 70 booklets developed to supplement PDP manuals) and 105 AV Aids as at Feb 88.</p> <p>One Resource Library officer had completed fellowship training in library automation and another is currently undergoing training in Japan.</p>	<p>I II III</p>
6 Conclusions		<p>In summary, guidance and assistance provided by LTEs & STEs have enabled the RC to produce seminars, documentaries, training and corporate video programs competently. However, further assistance is needed in the production of stand-alone interactive videos, drama & variety type programs as well as maintenance of 3rd phase equipment.</p>	<p>III</p> <p>II</p>

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	Productivity Measurement	Evaluation I II III
1 Practical Guidance and Assistance	LTEs/STEs gave instructions on techniques for measuring productivity at company, industry and national levels. Technology transfer is considered to be completed for the Bank of Japan and JPC systems of analysing value-added.	III
2 Development of Training Materials	LTEs/STEs developed a manual entitled: "Principles of Value Added Productivity Analysis". The manual imparted techniques of value added productivity measurement for improving productivity at the company level. As a sequel to the manual, NPB published the booklet "Daily Value Added Analysis" in Jun 1986. This publication showed practical application of the value added concept.	III
3 Model Company Project	LTEs/STEs gave guidance on productivity measurement procedures and introduced the concept of value-added. NPB consultants are now able to do the productivity analysis of the company's productivity status using the value-added method.	III
4 Seminars/Workshops	Lectures by LTEs/STEs 1) Japanese productivity movement and value-added analysis 2) Management analysis and productivity measurement 3) Methods for measuring productivity 4) Comparison of value-added among enterprises, etc.	III
5 Publications of Data	LTEs/STEs gave guidance on how to compile and utilise productivity statistics. NPB has recently published and distributed a number of periodicals and pamphlets pertaining to productivity surveys and statistics.	III
6 Preparation of Papers/Reports	LTEs/STEs prepared papers & reports and submitted them as reference materials to NPB personnel.	III

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	Productivity Measurement	Evaluation I II III
7 Conclusions	<p>NPB has through the PDP absorbed the expertise of the value-added method as a measure of the company's productivity and developed their own method of measuring and analysing productivity at company and industry level. For the next phase, NPB would need other measures such as non-value-added method to measure the productivity of a specific operation and of the company for the purpose of management guidance projects in the establishment of flexible wage system and management planning & control system.</p>	<p>III</p>

EVALUATION OF TECHNOLOGY BY FIELD OCCUPATIONAL SAFETY & HEALTH

Fields Contents & Evaluation Item	Occupational Safety & Health	Evaluation I II III
1 Practical Guidance & Assistance	<p>LTes introduced law, rules and regulations relating to OSH in Japan. Actual OSH activities in Japan was also introduced. Lectures on OSH Management - Japanese Practices were conducted by LTes. A long Range Plan on OSH Promotion has been proposed.</p>	<p>III</p>
2 Development of Training Materials	<p>The MRT Safety Supervisor Course, Shipyard Safety Instruction Course were reviewed and amended and many runs of the course had been conducted since then. The Practical course on Industrial Hygiene was launched in Sep. 87 with guidance from experts. Training packages and pamphlets for use in workshops on Zero Accident Movement (ZAM) were developed by the PDP experts. Related and relevant OSH materials were also developed by experts.</p>	<p>III</p>
3 Training of Staff	<p>STEs were dispatched for MRT Construction Safety, Press & Related Machines, Chemical Safety, Shipyard Safety, Industrial Hygiene, Building Construction and Zero Accident Movement (ZAM). Training materials for these and Safety Management Course were developed; recommendations were also made. Counterparts assigned to each expert and fellows were trained. The staff, however, will still require further training to implement follow-up actions in ZAM, Safety Week, OSH Exhibition, Foremen & New Worker Training, and Voluntary Machinery inspection.</p>	<p>II</p>
4 Seminar/Workshops	<p>Workshops in the areas of Press machine and related machines, Shipyard Safety and ZAM were conducted jointly by experts and OSH staff. Workshops/Seminars on OSH matters were also conducted by experts and counterparts.</p>	<p>III</p>
5 Conclusions	<p>On the whole, the transfer of technology in the area of OSH under the PDP had been highly successful. Further assistance, however, would be required in Safety Management, Foremen and New Worker Training, OSH Exhibition, Industrial Hygiene Laboratory, ZAM, Press and Construction Machinery Inspection.</p> <p>NPB and MOL (S) would like to put on record their deep appreciation to MOL (J) for their commitments and efforts put in.</p>	<p>II</p>

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	Management Consultancy & Small and Medium Enterprises (SMEs)	Evaluation I II III								
<p>1 Direct Assistance to SMEs through Consultancy Projects</p>	<p>Direct assistance to SMEs through Consultancy services of the NPB Management Guidance Centre. The area of assistance and advice in the Management Guidance Projects are :</p> <ol style="list-style-type: none"> 1) Improvement of production systems and shopfloor operations including basic 5S 2) Organisational review and improvement 3) Establishment of flexible wage system (FWS) 4) Establishment of performance appraisal system related with FWS 5) General diagnosis of SMEs <p>PDP experts had helped train and develop NPB Consultants through their capacity as project advisors or project leaders. They also conducted clinic sessions which were on-the-spot advisory sessions.</p> <p>As at Jan 88, there are altogether 38 projects which involved the Japanese experts :</p> <table style="margin-left: 20px;"> <tr> <td>Completed</td> <td>- 21</td> </tr> <tr> <td>Consultancy Phase</td> <td>- 11</td> </tr> <tr> <td>Group Project</td> <td>- 7 (6 completed)</td> </tr> <tr> <td>Preliminary Study</td> <td>- 5</td> </tr> </table>	Completed	- 21	Consultancy Phase	- 11	Group Project	- 7 (6 completed)	Preliminary Study	- 5	<p style="text-align: center;">II</p>
Completed	- 21									
Consultancy Phase	- 11									
Group Project	- 7 (6 completed)									
Preliminary Study	- 5									
<p>2 Development of Training Materials</p>	<p>The following SME courses were jointly developed by JPC under FDP. The following courses were conducted with the assistance of the PDP experts :</p> <ol style="list-style-type: none"> i) Corporate Planning and Control ii) Corporate Strategy in the Retail Sector iii) Corporate Strategy in the Manufacturing Sector iv) Financial Management and Analysis v) Export Marketing <p>The following sessions were developed by PDP experts for the SME course :</p> <ol style="list-style-type: none"> i) Productivity audit ii) Job enlargement iii) Work discipline 	<p style="text-align: center;">II</p>								

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	Management Consultancy & Small and Medium Enterprises (SMEs)	Evaluation I II III
	<p>iv) Development of intellectual skills v) Effective work team vi) Operational efficiency vii) Successful example of job enlargement (Singaporean Company) viii) Successful example of job enlargement (Japanese Company) ix) Organisation & Human Resource Development x) Merlion & Company Project xi) Under Japanese Management</p> <p>The SME courses developed include :</p> <ul style="list-style-type: none"> i) Financial Management & Analysis ii) Understanding Small Business (Management Assistance Programme) iii) Corporate Planning & Control iv) Export Marketing v) Small & Medium Business Programme vi) Management Assistance Programme vii) Entrepreneurship Development Programme ix) Workers Training Programme 	<p>II</p> <p>II</p> <p>II</p>
3 Model Company Project	<p>The idea of Model Company was mooted by the PDP Chief Advisor, Mr K Sakurai in 1985. Under the Model Company Project, the Company will be encouraged to share its upgrading experience with other companies by videotaping in visible progress and publicising its success at the completion of the project. Successful Model Companies include Fowseeng Plastics and Watson Electroplating. The Model Company Steering Committee was subsequently renamed Management Guidance Project Steering Committee. Due to lack of expertise, consultancy and assistance could not be extended to the service industry. Model companies developed were mainly those from the manufacturing Sector.</p>	<p>II</p>
4 Training of Consultants	<p>The Management Consultant Course (300 hrs duration) has been developed to train and develop consultants to assist the SMEs. The first run of the course was conducted in Japan from 8 Aug 86 to 8 Nov 86. An additional 128 transparencies to supplement the first 30 sessions of the course manual were developed by PDP experts during attachment in NPB.</p>	

EVALUATION OF TECHNOLOGY TRANSFER BY FIELD

Fields, Contents & Evaluation Item	Management Consultancy & Small and Medium Enterprises (SMEs)	Evaluation I II III
	<p>12 local managers/consultants and 4 NPB staff were trained through the fellowship programme in Japan. They are now involved in providing direct assistance to SMEs. On their return, a seminar on "Business Improvements through Management Consultancy" was organised to disseminate their learning experience and promote the concept of consultancy help to SMEs on 18 Dec 86.</p> <p>The 2nd run of Management Consultancy course was launched in Singapore on 5 Jan 87. The course was jointly conducted by PDP experts and PDP returned fellows. Subsequent runs were also scheduled. The operational improvement manual which contained the guidelines and recommendations on fact finding in the preliminary survey stage was prepared by the PDP expert. A training session on how to use the manual was also conducted by the expert and attended by all NPB Consultants. NPB consultants were also trained on consultancy techniques through training sessions and workshops by PDP experts. With assistance of the expert, various forms for evaluating the financial data of companies were designed which could be adapted for use in the following industries :</p> <ul style="list-style-type: none"> i) Constructions Industries ii) Manufacturing Industries iii) Wholesaler iv) Retail Industries v) Other Retail Industries vi) Service Industries <p>A manual and computer programme on Quick Management Analysis (QMA) were developed. Workshops to impart skills on how to assess the company's profitability and productivity within a short time using QMA were organised. With limited resources, NPB could not provide total assistance to every company which sought its assistance. NPB planned to train and develop a pool of productivity diagnosticians who could render quick business diagnosis for the companies just like Japan. A course on diagnostic survey could be developed to train and develop a pool of diagnosticians.</p>	<p style="text-align: right;">II</p>

REPORTS BY PDP SHORT-TERM EXPERTS

Report No	Report Title	Submitted By	Date Submitted
P DPRST 1	Productivity Improvement and Labour Management Relations Report and Recommendation	Naomi Maruo	Dec 83
P DPRST 2	Report on the Findings of the Survey on Productivity Issues and SGA Training Needs in Manufacturing Sector (17 Dec 83 - 5 Jan 84)	O Umeda (STE) K Sato (LTE)	5 Jan 85
P DPRST 3	Some Recommendations and Tasks for the Future in Productivity Measurement at National - Sectoral Level in Singapore : Survey Report of Short Term Mission to National Productivity Board in Singapore	Dr Kazukiyo Kurosawa, Prof of Productivity Science, Tokyo Institute of Technology	Jan 84
P DPRST 3A	National-Sectoral Productivity Planning & Analysing System : Composite Inter-linked Index Number System for the Analysis & Planning of National-Sectoral Productivity (CILIN SYSTEM FOR NEW & N-SP)	Dr Kazukiyo Kurosawa, Prof of Industrial Economics & Management Science, Tokyo Institute of Technology	
P DPRST 3B	Productivity Measurement & Analysis at the Company Level (An Aggregate Index for the Analysis of Total Cost Productivity & Rentability : The AIPR System)	Dr Kazukiyo Kurosawa	Dec 83
P DPRST 3C	International Comparison of Labour Productivity & Total Productivity : Lecture Notes (Lectured at NPB, Singapore, Dec 83)	Dr Kazukiyo Kurosawa	Dec 83
P DPRST 3D	Some Consideration on the Labour Productivity Index Compiled by the Japan Productivity Centre	Dr Kazukiyo Kurosawa	Dec 83
P DPRST 3E	Index Number of the Rate of Operation in Manufacturing Industry	Dr Kazukiyo Kurosawa	Dec 83

Report No	Report Title	Submitted By	Date Submitted
PDPRST 3F	Some Consideration on the System of Statistics for the Purpose of Measuring Productivity, Considering the Japanese Experience & Singapore Situation	Dr Kazukiyo Kurosawa	Jan 84
PDPRST 3G	Recommendations on the Compilation of Productivity Indices : A Systematic Way of Responding to the Problems raised through the discussion on 27/12/83	Dr Kazukiyo Kurosawa	Dec 83
PDPRST 3H	An Application of the CILIN System on the Singaporean Situation	Dr Kazukiyo Kurosawa	Dec 83
PDPRST 4	Report on Mission to Singapore on Labour Productivity Measurement (at national level)	Makio Nakazawa	Jan 84
PDPRST 5	Report on the Findings of the Fact for Sustaining the Small Group Activities (16 - 21 Jan 84)	Y Ueda (STE) & K Sato (LTE)	21 Jan 84
PDPRST 6	Report on the Findings of the Climate Survey of Manufacturing Companies (8 - 25 Dec 83)	Toshio Ogiya	Jan 84
PDPRST 7	Report on Observations and Recommendations on Firm Level Productivity Measurement in Singapore	Prof Y Mafune PDP short-term advisor, College of Commerce, Nihon University	Jan 84
PDPRST 8	Report on Observations and Recommendations on Firm Level Practice of Productivity Analysis in Singapore	Kiyoshi Wainai CPA (Senior Partner, Eikon Company, Japan	Feb 84
PDPRST 9	Survey on the Training Needs in Ten Singaporean Firms	Tomio Joichi, Japan Int'l Cooperation Agency (JICA)	Dec 83
PDPRST 10	Course on Survey Research : 10 Jan - 20 Jan 84)	Prof Kazuo Kawatake Dr Shinsaku Kohei, JICA	Jan 84

Report No	Report Title	Submitted By	Date Submitted
PDPRST 11	Recommendations on the Development of Training Programme on Office Automation	Junzo Yamada & Yukio Otonari, JICA	Mar 84
PDPRST 12	Summary of Lectures and Recommendations	Dr Yasuo Fujii, JICA	Mar 84
PDPRST 13	Report on Human Resource Management Practices in Singapore	Prof Hideo Inohara, JICA	Mar 84
PDPRST 14	Recommendations on the Information Activity about Productivity in NPB in Singapore	Dr Kazukiyo Kurosawa	Mar 84
PDPRST 15	An Introduction to Survey Methodology	Shinsaku Kohei/ T Omura	Mar 84
PDPRST 16	Report on Survey of Aerospace and Ship Maintenance Industries	Osamu Umeda	Mar 84
PDPRST 17	Report on Survey of Strategic Management of Effective Promotion and Information Activities	Iwao Takahashi & Kei Nakano	Jun 84
PDPRST 18	Report on how to Get Companies to Set up In-House Training	Tomio Joichi	May 84
PDPRST 19	Preliminary Report on Company Welfarism and COWEC Scheme in Singapore	Yoshitaka Fujita & Itsuro Kininoki	May 84
PDPRST 20	Productivity Movement and QC Circle Activities in the Retail Sector	Katsumi Yoshihara	Sep 84
PDPRST 21	Disclosure & Utilisation of Financial Position - Comparison Between Japan & Singapore	Kiyoshi Wainai	Sep 84
PDPRST 21A	"Productivity and Profitability" - Manual on Productivity Analysis. (Wide Sense - Including Business Analysis)	Kiyoshi Wainai	Sep 84
PDPRST 21B	Recommendation of the Promotion Method for Diffusion of the Value Added Concept to In-Company Accountants in Singapore	Kiyoshi Wainai	Sep 84

Report No	Report Title	Submitted By	Date Submitted
PDPRST 21C	Productivity Management in Japan	Kiyoshi Wainai	Sep 84
PDPRST 22	Comments for the Observation in QCC Activity in Singapore	I Miyauchi	1
PDPRST 23	Guideline of Company Productivity Action Plan	Toshio Ogiya/ Akinori Komatsubara	17 Apr 85
PDPRST 23A	Overall Comments as Short Term Advisors	Toshio Ogiya/ Akinori Komatsubara	17 Apr 85
PDPRST 24	Inter-Firm Productivity Analysis - A Manual for Productivity Measurement	Shigeo Shirata	17 Apr 85
PDPRST 25	Guidance on Total Planning of Resource Centre Activity Report	Toyoo Tanaka/ Masaaki Morita	17 Apr 85
PDPRST 26	Report on QC Circle in the Banking Sector in Singapore	T Dairoku	17 Apr 85
PDPRST 27	Report on the Findings of Survey on Factors Affecting Productivity in the Retail Industry	Soichiro Nagashima	17 Apr 85
PDPRST 28	Guidance on Programme Productivity Activity Report	Toshihiko Kosaki	17 Apr 85
PDPRST 29	Report on Training & Quality of Services in the Retail Industry	Takehisa Muroo	28 Aug 85
PDPRST 30	Final Report on Improving the MRT Construction Safety Supervisors Training Programme	Kenji Sato	20 Apr 85
PDPRST 31	Summary Report as Short-Term Expert of Quality Management and QCC	Porf Y Tsuda	28 Aug 85
PDPRST 32	Report on Productivity Gainsharing	Ryohei Magota	Oct 85

Report No	Report Title	Submitted By	Date Submitted
P DPRST 33	Report on Labour-Management Relations in Singapore - 2nd SCLMC Report	Ryokichi Hirono	Oct 85
P DPRST 34	Report on Company Welfarism	H Nagashima	Oct 85
P DPRST 35	Report & Recommendations on QCC	Ms Kiyoko Miyawaki	Nov 85
P DPRST 36	Summary Report on Audio Visual Technology	Prof Kunihiro Suetake	Feb 86
P DPRST 37	Summary Report as Short-Term Expert on the Application of QCCs in Small & Medium - Sized Enterprises	Yasunaga Takemura	Feb 86
P DPRST 38	LTE's & STE's Summary Report on Value Analysis/Value Engineering	H Suzuki, LTE N Teshima, STE	Feb 86
P DPRST 39	Report & Recommendations	Z Shimada, STE	Feb 86
P DPRST 40	Final Report on Zero Accident Movement (ZAM) in Singapore	H Tanabe, STE	Feb 86
P DPRST 41	Report & Recommendations on AV Technology	S Nakamura, STE	Feb 86
P DPRST 42	LTE's & STE's Experts Summary Report on Flexible Manufacturing System	H Suzuki, LTE Dr Y Furukawa, STE	Mar 86
P DPRST 43	Final Report on Zero Accident Movement (ZAM) in Singapore	H Hasegawa, STE	Mar 86
P DPRST 44	Final Report on Improving the Metal-Working Safety Supervisors' Training Programme	M Komori, STE	Mar 86
P DPRST 45	Summary Report as Short-Term Expert of Audio-Visual Technology Section	S Utsumi	Aug 86
P DPRST 46	Report & Recommendations (II)	Z Shimada	Aug 86
P DPRST 47	Final Rpeort on the Work to Develop the Supervisors' Chemical Safety Training Course	M Kuwabara	Aug 86

Report No	Report Title	Submitted By	Date Submitted
PDPRST 48	Long-Term Experts' and Short-Term Experts' Summary Report on Total Productive Maintenance (TPM)	N Nakata) STE J Yamaguchi) H Suzuki) LTE T Hikosaka)	Oct 86
PDPRST 49	Report & Recommendations (III)	Z Shimada	Jan 87
PDPRST 50	Report on Export Marketing	H Tanaka	Jan 87
PDPRST 51	Report & Recommendation on Management Guidance in SMEs	T Sase	Jan 87
PDPRST 52	Report of Short-Term Expert #11 on Just-In-Time Production System	H Iwayama	Mar 87
PDPRST 53	Report on On-the-Job Training	Prof K Koike	Mar 87
PDPRST 54	Long-Term Expert's Summary Report & Short-Term Expert's Report on Total Productive Maintenance	H Suzuki K Nakata	Apr 87
PDPRST 55	Report on Management Guidance/ Training under PDP	Tsutomu Furuya	Apr 87
PDPRST 56	Report & Recommendation on Lighting	K Onozawa	Apr 87
PDPRST 57	Report & Recommendation on Video Production	M Satoh	Apr 87
PDPRST 58	Report of STE#5 on Total Quality Control	M Baba	Apr 87
PDPRST 59	Report on Role of Art in Video	Kosuke Tsukada	Apr 87
PDPRST 60	Report of STE#9 on Just-in-Time Production System	Prof Yasuhiro Monden	Jun 87
PDPRST 61	Report on Study of Needs, Desirability & Feasibility of Senior Management Development Programme	Prof Hideo Inohara	Jun 87
PDPRST 62	Report and Manual of STE #22 on Training Video Packages for Resource Centre	Atsuo Tsuji	Jun 87

Report No	Report Title	Submitted By	Date Submitted
P DPRST 63	Report on Video Visual Production	M Akahori	15 May 87
P DPRST 64	Report on STE #16 on Just-In-Time Production System	H Iwayama	7 Jun 87
P DPRST 65	Report on Monitoring & Suggestion Scheme in QCC Structure	K Sato	5 Jul 87
P DPRST 66	Report on STE #21 on Information Gathering & Dissemination	J Arai	19 Jul 87
P DPRST 67	Report on On-the-Job Training under PDP	T Furuya	21 Aug 87
P DPRST 68	Report on STE #18 on TQC in Service Sector	M Itoh	29 Jul 87
P DPRST 69	Report on STE #8 on Worker Training in Service Sector	S Suzuki	31 Jul 87
P DPRST 70	Report on STE #7 on Worker Training in Mfg Sector	Y Nagata	31 Jul 87
P DPRST 71	Report on STE #6 on Business Efficiency Through Better LMR	T Oba	18 Aug 87
P DPRST 72	Report on Productive Maintenance	K Nakata	31 Jul 87
P DPRST 73	Report on Flexible Wage System under PDP	H Suzuki	4 Sep 87
P DPRST 74	Report on Gainsharing under PDP	R Magota	16 Sep 87
P DPRST 75	Report on STE #20 on Export Marketing	H Tanaka	9 Sep 87
P DPRST 76	Report on STE #14 on Use of Special Effects in Video Programme Production	T Sakamoto	22 Sep 87
P DPRST 77	Report on QCC for Service Industry	N Kaneko	9 Sep 87
P DPRST 78	Report on TQC in Service Sector	M Itoh	12 Dec 87

Report No	Report Title	Submitted By	Date Submitted
PDPRST 79	Report on STE #17 on Just-in-Time System	H Iwayama	6 Dec 87
PDPRST 80	Report on Advanced Training in Studio Production of Training Videos	Y Matsuda	13 Jan 88
PDPRST 81	Report on Lighting	I Naitoh	13 Jan 88
PDP MOL 1	Report and Manual on Industrial Hygince (Work Enviroment Measurment)	A Takitawa	16 Apr 87
PDP MOL 2	Report and Manual on Shipyard Safety	M Sato	10 Oct 87
PDP MOL 3	Report on Zero Accident Movement	K Kamagata & M Hasegawa	22 Jan 88

REPORTS BY LONG-TERM EXPERTS

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 1	Summary of Findings on the Productivity Issues in Ten Singaporean Firms	I Wada	Jan 84
PDPRLT 2	Recommendation to Filed Unit's Study Mission	T Omura	24 Jan 84
PDPRLT 3	Recommendation on Compilation of Productivity Movement Indicators (First Recommendation)	T Omura	18 Feb 84
PDPRLT 4	Proposed Productivity Sessions on Management Development Course	I Wada	19 Mar 84
PDPRLT 5	Comments & Recommendations on Filed Unit's Study Mission Plan FY84	T Omura	3 Apr 84
PDPRLT 6	Information & Recommendations on Study Mission Organising Procedures	T Omura	12 Apr 84
PDPRLT 7	Technical Guidance Plan for Promoting Value Added Measurement Method to Companies (Draft)	M Shimizu	1 Jun 84
PDPRLT 8	Technical Guidance Plan for Productivity Promotion at Enterprise Level including Method of Improving Physical Productivity at the Workplace (Draft)	M Shimizu	Jun 84
PDPRLT 9	Recommendation for Improving QCC Convention	K Sato	27 Jun 84
PDPRLT 10	Advice on Promotion & Information Division - Strategic Plan	T Omura	2 Mar 84
PDPRLT 11	Recommendations on Conducting PM-G & Benchmark Survey	T Omura	20 Jul 84
PDPRLT 12	The Factors for Better Understanding on Small Group Activities related to the Productivity Movement	K Sato	Jul 84

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 13	Recommendations for Better Understanding of Total Quality Control (TQC)	K Sato	16 Jul 84
PDPRLT 14	Recommendations for Introducing Safety Measure into Small Group Activities	K Sato	Jul 84
PDPRLT 15	A Trial to decide the Direction & Activities of PRD - Survey Unit	T Omura	Jul 84
PDPRLT 16	Comments on Compiling Productivity Survey	M Shimizu & T Omura	Aug 84
PDPRLT 17	A Comparative Analysis of Productivity Promotion Activities Between NPB Singapore & JPC	T Omura	Aug 84
PDPRLT 18	Approach to Added Value & Its Analysis	M Shimizu	Oct 84
PDPRLT 19	Pre-Study Mission Seminar on Employment of Elderly Workers in Japan	H Inoue/K Sato /I Wada	Oct 84
PDPRLT 20	A Trial Integration of 3 Times Surveys	T Omura	Nov 84
PDPRLT 21	A List of JPC's Past Surveys	T Omura	Nov 84
PDPRLT 22	Educational System in Japan	I Wada	Oct 84
PDPRLT 23	Application of Japanese Management to Singaporean Companies	I Wada	Aug 84
PDPRLT 24	My Observations & Recommendations on Productivity Month Events	T Omura	Jan 85
PDPRLT 25	Information & Recommendations on How to Release Present In-house Communication Course	T Omura	Jan 85
PDPRLT 26	Recommendations for Improving QCC Convention II	K Sato	Nov 84

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 27	Application of Training Games to QC Circle Activities	K Sato	Feb 85
PDPRLT 28	My Ideas on How to Improve the Contents of "The Productivity Digest".	T Omura	Apr 85
PDPRLT 29	Improving Top Management Competence in Upgrading the Status-quo of the Commerce Sector - What Should You do in an Unit-by-Unit Approach	M Shimizu	Apr 85
PDPRLT 30	Company Productivity Plan by Using Value Added Analysis & General Situation of the Productivity Movement in the Company in Japan	M Shimizu	Apr 85
PDPRLT 31	Setting Standards for Quality of Services Provided in Retail, Hotel & Restaurant Sectors	I Wada	Apr 85
PDPRLT 32	Papers for the Committee on Productivity in the Manufacturing Sector (CPMS)	H Suzuki	Apr 85
PDPRLT 33	Paper on Some Basic Requirements for the Successful Implementation of Industrial Engineering Techniques	H Suzuki	Apr 85
PDPRLT 34	Training Materials Used at the Residential Seminar on Total Quality Control (TQC) - Concept & Application	K Sato & H Suzuki	28 Jun 85
PDPRLT 35	Recommendation on How to Improve the In-House Communication Course	T Omura	12 Jun 85
PDPRLT 36	Operation Log/Manual for Resource Centre's Main Equipment	K Kurauchi	1 Jul 85
PDPRLT 37	Draft of Interview Manual for Part-Time Interviewers	T Omura	28 Aug 85

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 38	Draft of Trainer's Manual for Part-Time Interviewer's Training	T Omura	28 Aug 85
PDPRLT 39	Report on Productivity Improvement at Company Level & Industrial Engineering Approach	H Suzuki	28 Aug 85
PDPRLT 40	Training Materials Used at the 2½-day Workshop on Industrial Engineering for Managers "Practice of Effective IE (Introduction)"	H Suzuki	28 Aug 85
PDPRLT 41	3P Clinic Manual	T Omura	28 Aug 85
PDPRLT 42	Evaluation Report on the Training Programme for Safety Committee Members	K Kano	16 Oct 85
PDPRLT 43	Application of Suggestion Scheme to QC Circle Activities	K Sato	Nov 85
PDPRLT 44	Recommendation for Improving the National Convention (Part III)	K Sato	Nov 85
PDPRLT 45	A Textbook on 3P Programmes	T Omura	Nov 85
PDPRLT 46	Report of Production Technology Course	K Kurauchi	Dec 85
PDPRLT 47	Application of "Good Communication Method" to QC Circle Activities	K Sato	Dec 85
PDPRLT 48	Manufacturing System & Industrial Engineering in Japan	H Suzuki	Dec 85
PDPRLT 49	Orientation for the Members of TQC Study Mission to Japan	H Suzuki	Dec 85
PDPRLT 50	Materials used at NPB/PDP Courses	H Suzuki	Dec 85
PDPRLT 51	A Practical Approach to Effective IE	H Suzuki	Dec 85
PDPRLT 52	Introduction to TQC for Better Understanding of QC Concept	H Suzuki/ K Sato	Dec 85

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 53	Evaluation Report on the Safety Management Programme	K Kano	Jan 86
PDPRLT 54	Evaluation Report on the Basic Industrial Safety & Health Programme for Supervisors	K Kano	Jul 86
PDPRLT 55	Recommendation for Promoting House-Keeping Practice Through QCC Activities	K Sato	Jul 86
PDPRLT 56	Case Introduction : Cost Reduction Through Implementing TQC in Honshu Paper Company Limited	K Sato	Jul 86
PDPRLT 57	Training Materials Used at the Workshop on Total Quality Control I	H Suzuki/ K Sato	Sep 86
PDPRLT 58	Training Materials Used at QCC Top Management Course	K Sato	Oct 86
PDPRLT 59	Recommendations for Improving the National QCC Convention	K Sato	Oct 86
PDPRLT 60	Application of the Simple QC Tools for QC Circle Activities	K Sato	Oct 86
PDPRLT 61	Papers Presented at IEQCC '86 : Multi-Role Aspects of QCC	K Sato	Oct 86
PDPRLT 62	Final Report on the Coordination of the Productivity Development Project in Singapore	H Wada	Oct 86
PDPRLT 63	Final Report on the Productivity Development Project	K Sato	Oct 86
PDPRLT 64	Final Report on Occupational Safety & Health Activities	K Kano	Oct 86
PDPRLT 65	Final Report of Long-Term Expert Under the PDP	I Wada	Oct 86
PDPRLT 66	Report on Management Guidance & Consultancy Assistance	H Kamimura	Dec 87

Report No	Report Title	Submitted By	Date Submitted
PDPRLT 67	Master Programme "Video Visible"	T Kosaki	Jun 86
PDPRLT 68	Master Programme "Narration Tells, Vision Tells"	T Kosaki	Jun 86
PDPRLT 69	Operation Manual on VTR Editing (3/4-inch Cassette Tape)	K Urabe	Jun 87
PDPRLT 70	1-inch VTR Maintenance Manual	K Urabe	Jun 87
PDPRLT 71	A 1-Day Seminar on TQC	T Hikosaka	Jun 87
PDPRLT 72	Total Quality Control at "A" Clock Ind Co Ltd	T Hikosaka	Jun 87
PDPRLT 73	Material Concerning Actors & Actress Audition	T Kosaki	Aug 87
PDPRLT 74	Attachment for VA/VE Workshop Material (Japanese Case Study)	T Hikosaka	Aug 87
PDPRLT 75	Question & Answer on TQC	T Hikosaka	Aug 87
PDPRLT 76	Singapore Towards More Productive Nation	A Ishiwara	8 Sep 87
PDPRLT 77	Kiyosu Castle Wall Repair Case : A Lesson Learnt From Young Toyotomi Hideyoshi	A Ishiwara	10 Sep 87
PDPRLT 78	Manual of Basic Camera Work	K Urabe	Oct 87
PDPRLT 79	A Successful Implementation of Company-Wide Productivity Schemes	A Ishiwara	Oct 87
PDPRLT 80	Quality Evolution - How to Reflect User's Required Quality in the Final Product	T Hikosaka	Oct 87
PDPRLT 81	Role of Facilitators in Sustaining QCC Activities	A Ishiwara	8 Oct 87
PDPRLT 82	Introducing the New QC 7 Tools	T Hikosaka	Nov 87
PDPRLT 83	Step Towards the Introduction, Promotion & Development of TQC	T Hikosaka	Jan 88

PDP Papers By Long-Term Experts

Paper No.	Title	Submitted By	Date Submitted
PDP M001	Papers on Self Appraisal System	K Ochiai	04/07/86
PDP M002	Lecture Note on The Key Features of Labour-Management Relations in Japan	K Ochiai	09/07/86
PDP M003	Translation of Union Materials for the Wage Increase Negotiation	K Ochiai	15/07/86
PDP M004	Your Request for Publication	H Wada	24/07/86
PDP M005	Use of Appraisal System	K Ochiai	24/07/86
PDP M006	Company & Union Training Systems in Japan	K Ochiai	24/07/86
PDP M007	Master Programme	T Kosaki	30/07/86
PDP M008	Materials on the VTR Editing Manual for Producer	K Urabe	06/08/86
PDP M009	Explanation of Union Materials "For the Negotiation of Wages in 1986" and An Example of Union Schedule for Wage Increase	K Ochiai	07/08/86
PDP M010	Materials on Productivity Measurement	I Wada	19/08/86
PDP M011	Materials on Japanese Financial Statistics	I Wada	25/08/86
PDP M012	Shift Work Systems in Japan	K Ochiai	06/09/86
PDP M013	Remuneration of Company President	K Ochiai	15/09/86
PDP M014	Bonus Amount in Two Industries in Japan	K Ochiai	26/09/86
PDP M015	Modified Bonus Amount in Four Industries in Japan	K Ochiai	13/10/86
PDP M016	Translation of Union Handbook	K Ochiai	17/10/86
PDP M017	Materials on Safety Management Course	K Kano	28/10/86
PDP M018	Materials on Training Course for Safety Committee Members	K Kano	29/20/86
PDP M019	Materials on Basic Industrial Safety & Health Course	K Kano	29/10/86
PDP M020	OJT Survey in Japan	K Ochiai	30/10/86
PDP M021	Proposal for the Survey on Wage System in Singapore	K Ochiai	05/11/86

Paper No.	Title	Submitted By	Date Submitted
PDP M022	OJT/OFF-JT Recommendation to Singapore Aero Engine Overhaul Limited	H Kamimura	13/11/86
PDP M023	Papers on Flexible Wage System & Productivity Gainsharing at the ASEAN Tripartite Meeting	K Ochiai	20/11/86
PDP M024	Data for Wage Negotiation, 1986 & an Example of Union's Survey on Household Expenditures	K Ochiai	21/11/86
PDP M025	Wage Increase Rate in Japan	K Ochiai	22/11/86
PDP M026	Comments on Problems in Implementing the NWC Sub-Committee Report on Wage Reform	K Ochiai	26/12/86
PDP M027	Examples of Bonus Formula	K Ochiai	27/12/86
PDP M028	Information for Wage Negotiation & List of Statistics Used	K Ochiai	29/12/86
PDP M029	Stock Ownership Schemes in Japan	K Ochiai	26/01/87
PDP M030	Wages in Public Sector in Japan	K Ochiai	23/02/87
PDP M031	Materials for Forum on FWS	K Ochiai	05/03/87
PDP M032	Report on FWS Survey at JCCI Seminar	K Ochiai	06/03/87
PDP M033	Model B2 on Flexible Wage System for SMEs	K Tsuchiya	06/03/87
PDP M034	Comments on "Pay System in the Japanese Public Service"	K Ochiai	17/03/87
PDP M035	Summary of Discussion with JCCI	K Ochiai	27/03/87
PDP M036	Wage Increase in Japan, 1987	K Ochiai	13/04/87
PDP M037	Yamatake's Bonus Amount	K Ochiai	27/04/87
PDP M038	Minutes of the 1st Meeting of JCCI Wage Reform Committee	K Ochiai	05/05/87
PDP M039	Materials of FMC FWS Plan	K Ochiai	04/06/87
PDP M040	Materials of CDF FWS Plan	K Ochiai	05/06/87
PDP M041	Minutes of the 2nd Meeting of JCCI Wage Reform Committee	K Ochiai	08/06/87
PDP M042	Overseas Labour Circumstances	K Ochiai	13/06/87

Paper No.	Title	Submitted By	Date Submitted
PDP M043	Materials of Forum on FWS Models	K Ochiai	13/06/87
PDP M044	Labour Management Relations & Consultation in Japan - Materials of PDP Core Course (5th Batch)	K Ochiai	17/06/87
PDP M045	Performance Appraisal System in Japan - Materials of PDP Core Course (5th Batch)	K Ochiai	22/06/87
PDP M046	Materials of 4th CDF Committee Meeting	K Ochiai	27/06/87
PDP M047	Minutes of the 3rd Meeting of JCCI Wage Reform Committee	K Ochiai	03/07/87
PDP M048	Discussion Materials of Business Games	K Ochiai	13/08/87
PDP M049	Minutes of the 4th Meeting of JCCI Wage Reform Committee	K Ochiai	04/09/87
PDP M050	Performance Appraisal System for CDF	K Ochiai	24/09/87
PDP M051	Minutes of the 5th Meeting of JCCI Wage Reform Committee	K Ochiai	01/10/87
PDP M052	Equal Quantum in Each Bonus in Yokogawa Electric	K Ochiai	06/10/87
PDP M053	Business Game Plan	K Ochiai	22/10/87
PDP M054	Manual of Basic Camera Work	K Urabe	22/10/87
PDP M055	A Report on "In-House Training - A Case of Nissan Motors Co Ltd	H Kamimura	13/11/87
PDP M056	Assessment of the Business Learning System	K Ochiai	14/11/87
PDP M057	Report on Consultancy Assistance in Flexible Wage System & Performance Appraisal System in Cosmetique de France	K Ochiai	24/11/87
PDP M058	3 Case Stories of Flexible Wage System	K Ochiai	15/12/87
PDP M059	Game Rules & Relevant Data of a Company in Business Simulation	K Ochiai	22/12/87
PDP M060	Flow Chart of Management Activities & Decision Making Sheets in Business Game	K Ochiai	14/01/88

MEETINGS OF PDP

1. JOINT COMMITTEE MEETING

- i) The Joint Committee would meet at least once a year and whenever necessity arises, and work :
- (1) To formulate the Annual Work Plan of the Project in line with the Tentative Implementation Plan set up under the framework of this Record of Discussions;
 - (2) To review the overall progress of the Technical Cooperation Programme set out in this Record of Discussions as well as the achievements of the abovementioned Annual Work Plan; and
 - (3) To review and exchange views on major issues arising from or in connection with the Technical Cooperation Programme.

ii) Dates Held

8 Apr 1985
7 Apr 1986
12 Mar 1987

2. MONTHLY PDP MEETING (MPM)

i) Terms of Reference

- (1) To monitor the progress of the Restructuring Plan of the PDP.
- (2) To monitor the progress of the PDP against the indicators for measuring tangible results as defined at the 1st Joint Committee meeting held on 8 Apr 85.
- (3) To direct future implementation of the Project.
- (4) To allow the Team of Experts to report on their progress.

ii) Dates Held

21 Dec 1983	13 Feb 1986
	14 Mar
29 Feb 1984	11 Apr
28 Mar	5 May
29 Apr	13 Jun
4 May	19 Jul
29 Jun	8 Aug
27 Jul	19 Sep
13 Sep	10 Oct
26 Oct	20 Nov
7 Dec	17 Dec
7 Feb 1985	15 Jan 1987
3 Mar	13 Feb
31 May	10 Apr
28 Jun	8 May
6 Aug	12 Jun
6 Sep	24 Jul
4 Oct	19 Aug
5 Nov	24 Sep
3 Dec	29 Oct
	15 Jan 1988

3. **TECHNICAL COOPERATION MEETING (TCM)**

i) Terms of Reference

- (1) To identify project/assignments for long-term and short-term experts to achieve tangible results for PDP.
- (2) To coordinate and monitor the progress of the transfer of expertise by the long-term and short-term experts.
- (3) To approve the terms of reference, workplan and programme of short-term experts.
- (4) To evaluate LTE and STE reports and recommendations for follow-up action.
- (5) To monitor follow-up action of LTE and STE recommendations.
- (6) To follow-up on matters discussed at the 2nd Joint Committee Meeting held 7 Apr 86.
- (7) To integrate the efforts of LTE and STE into the Productivity Movement.

ii) Date Held

13 Jun 1985

1 Jul

13 Aug

12 Sep

30 Sep

22 Feb 1986

25 Feb

25 Mar

26 Apr

24 May

28 Jun

22 Jul

21 Aug

18 Sep

16 Oct

19 Nov

23 Dec

9 Jan 1987

11 Feb

6 Mar

18 Jun

16 Jul

19 Aug

25 Sep

15 Oct

30 Nov

1 Feb 1988

ALPHA NEWS

Editor: Mohinder Kaur
A publication of NATIONAL PRODUCTIVITY BOARD

MAR 1988

Circulation: 1000 MCI(P) 5/8/87 Vol 5 No 12

30 additional fellowships for Singaporeans



Mr Sakata and Mr Mah at the signing ceremony

Some 100 guests witnessed the signing of the 2-year extension to the *Productivity Development Plan (PDP)* on 9 Feb 88. The extension signals the beginning of a new phase of co-operation between Japan and Singapore and will allow Singapore to continue learning from the Japanese for a further 2 years (1988 to 1990).

The first phase of the PDP, initiated in 1983, entered its fifth year of implementation this year. A 10-member team led by Mr Takeho Sakata (*Special Assistant to Director of the Mining & Industrial Development Co-operation Department in the Japan International Co-operation Agency*) arrived in NPB on 2 Feb to evaluate the results of the PDP in the 5 years of implementation and to formalise the extension of the project.

Mr Mah Bow Tan, Chairman of NPB, signed the extension on

behalf of the Republic of Singapore while Mr Takeho Sakata, Leader of the *Japanese Evaluation Mission* was the signatory of the Government of Japan.

Mr Mah, in his speech at the ceremony, mentioned that: "Despite the progress we have made, the recent intensive joint evaluation of the project by the Japanese and NPB officials concluded that there is still much more to be done. I agree with this conclusion. Compared to the Japanese Productivity Movement, launched over 30 years ago, the Singapore Productivity Movement is still an infant. We lag behind Japan in work attitudes, production systems, quality management, technical skills training and educational level of the workforce.

Not only behind Japan, but in some areas, also behind countries such as South Korea and Taiwan. So, in

the productivity race, especially with NICs, like Korea and Taiwan, we are barely keeping up. We need to invest more in training our workforce. We need to raise our quality standards especially in certain areas like our SMEs, our service sectors- hotels and retailing. We still have a long way to go. This is why we have requested that the PDP must be continued to make sure that the momentum is not lost. We appreciate Japan's recognition of this fact and the need for continued assistance through extending the project for a further 2 years."

The extension provides for the attachment of 8 Long Term Experts and 27 Short Term Experts from Japan at NPB. 30 Fellowship Awards, tenable at Japan, will also be given to Singaporeans over the next 2 years.

Jennifer Teo

ALPHA NEWS MAR 1988 1

HOME



Japan to continue aid in productivity

Project to be extended for 2 more years

TO FURTHER push Singapore's productivity movement, which still has "a long way to go", Japan has agreed to extend its help for another two years until 1990.

In a ceremony yesterday to mark the extension of the five-year Productivity Development Project, the chairman of the National Productivity Board, Mr Mah Bow Tan, said Japanese and NPB officials, who recently evaluated progress, had concluded that much more needed to be done.

"I agree with this conclusion. Compared with the Japanese productivity movement, launched over 30 years ago, the Singapore productivity movement is still an infant," said Mr Mah, who signed the extension agreement on behalf of the Singapore Government.

Mr Takeho Sakata, spe-



MR MAH
... need to invest more in training



MR SAKATA
... finds growth of Singapore economy encouraging

cial assistant in the Japan International Co-operation Agency, signed on behalf of his government.

Under the project, Japan will:

- **HELP** implement industrial engineering

methods, such as just-in-time inventory systems, in Singapore companies.

- **TRAIN** Singaporeans in the production of video programmes at the NPB's resource centre.

- **IMPROVE** the management skills of small

and medium-size companies in the manufacturing and service industries and;

- **HELP** upgrade Singapore foremen in occupational safety and health.

In addition, Japan will send 25 experts and provide fellowship awards to 25 Singaporeans for training in Japan.

Mr Mah said Singapore lagged behind Japan in work attitudes, production systems and training in technical skills. In some areas, Singapore even lagged behind countries such as South Korea and Taiwan.

He said Singapore needed to invest more in training its workforce and in upgrading quality standards in certain areas such as hotels.

Mr Sakata, who headed the 10-member team from Japan to evaluate the achievements of the project, was pleased that it had helped to strengthen Singaporeans' awareness of the need to be competitive internationally.

Launched in 1983

"In other words, I am very encouraged to learn that the Singapore economy achieved 8.6 per cent growth last year, much of which was due to an increase in productivity," he said.

The Productivity Development Project, funded by the Japanese government under the Asean Human Resources Development Project, was launched in 1983.

Singapore has received assistance worth \$40 million, part of it in the form of a grant for buying equipment and training materials.

In the past five years, Japan sent 149 experts to Singapore and helped train 150 Singaporeans in Japan.

4 in 10 workers convinced by productivity, says poll

COMPARED with their American counterparts, a larger proportion of Singapore workers think they will benefit from higher productivity, but workers here are still far behind the Japanese in their work attitudes.

This was one of the results of a National Productivity Board survey to gauge the views of Singapore workers.

The survey found that four in 10 workers here felt they would gain from productivity increases. This compares favourably with the three in 10 Americans who feel the same way, but is a far cry from the nine in 10 Japanese workers who believe that being more productive will benefit them directly.

Most workers here feel their companies and owners have the most to gain if they raised their produc-

tivity. Almost nine in 10 of the 1,000 workers interviewed in the survey felt this way.

But this attitude has been changing over the years. Figures show that in 1982, only one in five workers believed they will benefit from extra productivity.

The yearly productivity attitudes survey showed the worst results in 1986, probably due to workers being sceptical about productivity increases as their wages did not rise during the recession.

In fact, the latest survey found that cash rewards and pay rises were the best ways to convince workers about the benefits of putting in extra effort.

Six in 10 workers, who could not see gains in greater productivity, cited this as the best way. Some said a better work environ-

ment would be another way of sharing gains.

The NPB said this showed that a flexi-wage system, where workers are rewarded if their company does well, can help convince workers that they have a stake in their companies' performance.

According to the NPB survey, the majority of workers — two in three — have some understanding of flexible wages.

But the most encouraging result was that more workers are participating in the various productivity schemes in their company.

In 1986, only four in 10 took part in small group activities such as quality control circles, while two in 10 made suggestions on how to improve productivity.

But last year, more than six in 10 workers took part in these areas.

我国生产力运动只处于婴儿阶段

马宝山:各业工人素质须提高

国家生产力局主席马宝山强调,在台湾和韩国比较,我们在生产力竞赛方面,还是赶不上它们。

因此,他认为我国有必要花更多时间、精力与金钱在劳动力训练方面。

他说,我们有必要提高我国行业和工人的素质,特别是在中小企业和服务业如旅馆与零售业上。

比韩国台湾落后

他强调,在提高生产力方面,新加坡仍有一段漫长的路程可走,因此,我国政府要求生产力发展计划应持续下去,以确保提高生产力的动力不会半途而废。

马宝山和坂田武德代表新日两国政府,昨日签署生产力发展计划延长阶段协议。



他指出,和日本生产力运动比较,我国生产力运动只是处于婴儿阶段,不管在工作态度、生产系统、品质管理、技术训练和工人教育水平方面,我们远远落在日本之后;甚至在某些领域里,落在韩国和台湾之后。

获日本专家协助

在谈到生产力发展计划为我国所取得的成就时,马宝山说,在数量上,我们取得很大的成就。日本在这项计划下,共派遣了23名长期专家和126名短期专家到我国协助推行一些特定计划如生产管理、

灵活工资制度、生产力衡量与管理指导等。

他说,在日本专家的协助下,生产力局开办了28项新课程如生产力辅导员课程和品质管理高级品质管理课程,而且还有超过1万5000名管理层人员和工人参加日本专家讲解的研讨会。

他表示,日本专家也同时协助我国公司推行各种不同的生产力计划如适时制度、全面生产力维持制度、全面品质管制制度和综合生产力运动概念。

派管理人员受训

此外,马宝山也透露,在生产力发展计划下,共有150名新加坡管理层人员在日本接受训练,以深入了解日本生产力运动,学习开办和生产力有关的训练课程的技术,以及如何为中小型企业提供管理咨询服务。

他表示,这项计划也加强生产力局的管理指导活动和模范公司计划。

他指出,和日本专家共同工作,扩大了我们的思想,让我们了解他们的思想和以长远利益为目标的工作价值观,这些都是促使日本生产力运动成功的主要因素。

他说,我们可以根据这些因素来策划我国生产力运动的长远策略,使我国顺利迈入九十年代。

日本政府代表坂田武德指出,生产力发展计划加强新加坡人民的意识,了解产品在国国际竞争方面的意识。新加坡在去年所取得的8.6%成长,可说是这项计划所带来的结果。(Z24PZE)

加强发展生产力 日将继续助我国 新日生产力发展计划延长两年

新加坡和日本昨日把生产力发展计划延长两年,从今年至1990年。

在这项生产力发展计划延长阶段,日本政府将协助我国加强下列四方面的生产力发展:

- 第一,工业工程、品质管制与全面品质管制;
- 第二,录影节目制作;
- 第三,中小型企业管理咨询服务;
- 第四,职业安全与卫生。

日本政府将继续派遣生产力专家来我国,同时提供机会让我国人员在日本受训。

不过,在技术合作方面,日本政府在延长阶段所提供的援助,将是生产力发展计划正式推行阶段的一半,也就是说,在未来两年内,日本政府将派遣25名生产力专家到我国,同时提供25份训练奖让我国人员在日本受训。

新日两国政府昨日在国家生产力局签署这项生产力发展计划延长阶段与1988至1990年行动计划协议。代表两国政府签署的是国家生产力局主席马宝山和日本国际协力事业团矿业开发协力部部长特别助理坂田武德。

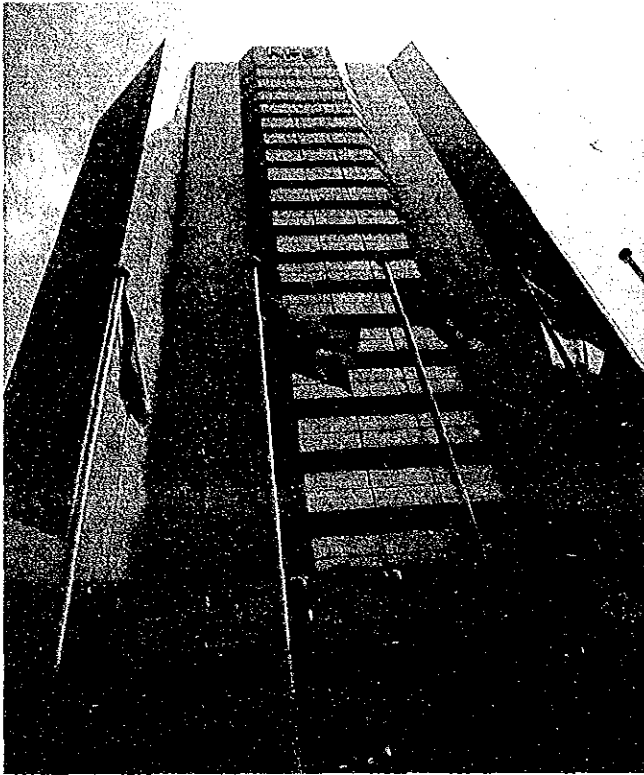
日本政府是在1983年为我国提供为期五年的生产力发展计划,以协助国家生产力局在全国推动

提高生产力运动,从而提高新加坡的生产力。

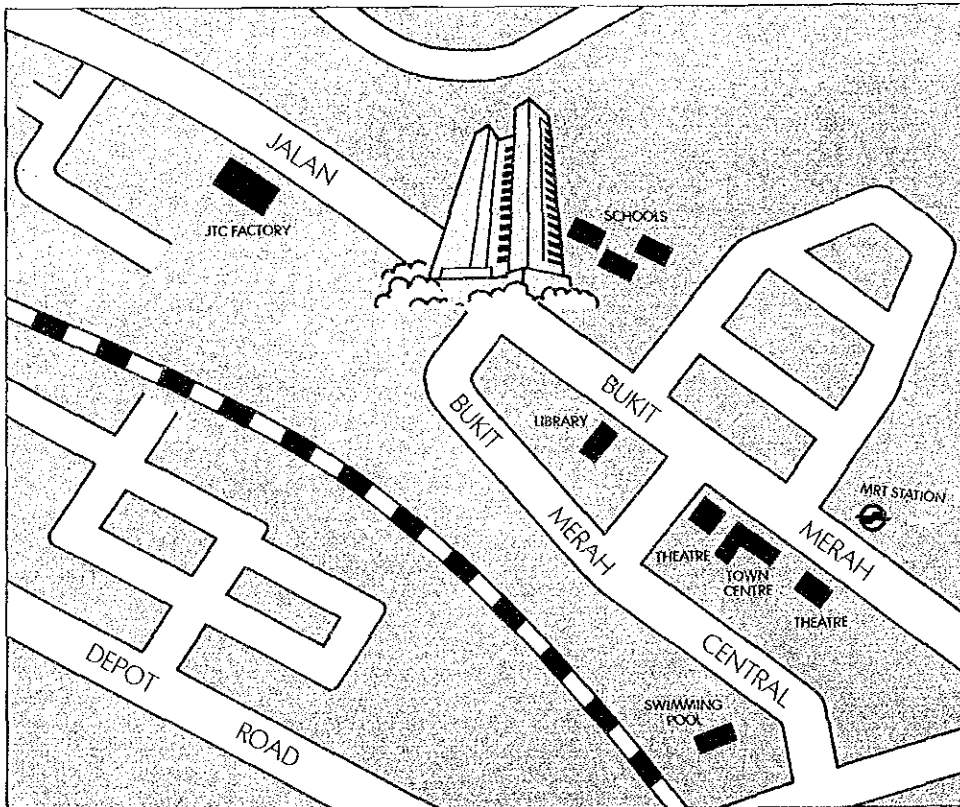
这项耗资4000万元的生产力发展计划在今年结束,两国政府决定再延长两年。

日本政府所派遣的一个评审团目前正在我国,评审生产力发展计划的成就和拟定未来两年的行动计划。

这个由坂田武德率领的10人评审团已经和国家生产力局制定了未来两年的四项发展计划,即工业工程、品质与全面品质、录影节目制作、中小型企业管理咨询服务、职业安全与卫生。(PPA)



**NATIONAL
PRODUCTIVITY
BOARD**



LOCATION MAP

JICA