ANNEX 2-2 Project Implementation Process

Items	Sub Items	Points of survey	Result of the Study
Activity Performance	—	1) Performance of Activities 2) Factors to prevent achieving Outputs	Among activities followings are some delay. The completion of the textbooks, which was originally planned to be finished by the 2nd year, are rather delayed, mainly because the equipment for teacher training have not been sufficiently procured due to the lack of budget allocation to TTC. Originally, 2 more training courses were planned during September to December 2007 (for 10th & 11th grade), and February to May 2008 (for 12th grade), but those courses were postponed by MoNE who put a priority on re-structuring of the training courses. Though these drafts are under the process of making consensus among related parties, they are slightly different and no official draft document was found.
Operation & Management of the Project	Project Monitoring	1) Is Project Monitoring conducted as planned(including report to JICA and JCC)	Reports to JICA were submitted and JCCs were held as planned.
		2) Is the internal monitoring system established?	Some internal monitoring activities were conducted. However Check and Action portion of PDCA (Plan, Do, Check and Action) cycle is weak in project management
		3) Were appropriate actions taken towards the subjects clarified by the monitoring?	1st version of "Teacher Training Manual" is drafted.
		4) Was PDM or PO revised as the need arises?	PDM was revised once and at this midterm evaluation another revision was proposed and approved.
	Decision Making Process	How is the Decision Making Process? Is it appropriate?	Most decisions were made through meetings. 1st version of "Teacher Training Manual" is drafted.
	Working structure	Is working structure of the Project appropriate?	Working structure of the Project has no serious problems.
Relation with related organizations	Relation with MoNE	1) How is the involvement?	MoNE is committed and deeply involved
		2) How is the communication?	They have certain communication but more communication is preferred
		3) How is the recognition on the project?	MoNE recognizes needs of training for IAT teachers and recognizes the Project well
		4) Any obstacles? Was any measures taken?	Nothing in particular
		5) Does MoNE show clear policy on Teachers Training after the Project?	MoNE has clearly stated at JCC held on Feb. 27, 2009 that TTC will continue to function as a training center in the field of IAT after the completion of the Project based on the approval by the Minister and that the Ministry will maintain its emphasis on the field.
	Relation with expansion	1) How is the involvement?	Expansion schools send the trainees based on the allocate numbers

1

Items	Sub Items	Points of survey	Result of the Study
	schools	2) How is the communication?	Network between TTC trainers and expansion school teachers was established, and TTC become a consulting center for expansion schools
		3) How is the recognition on the project?	Expansion schools has needs of training and they recognize the Project well
		4) Any obstacles? Was any measures taken?	Nothing in particular.
Relation within the Project team	Among C/Ps	1) How is the communication between CPs?	They stay in the same room and communications are held almost everyday.
		2) How is the recognition on the project?	Recognition on the project by CPs are high
		3) Are capacity, assignment and numbers of CP appropriate?	Capacity and numbers of CP are appropriate, but regarding assignment, CPs are not working exclusively for the project have caused some difficulties to carry out the Project activities.
		4) Is motivation for CPs secured?	Intangible motivation is secured but less tangible motivation (income, tangible official recognition, time pressure) are given so far.
		5) Was any action taken if there was some problems on the above 4 items?	Some actions were taken but they were not enough to solve the problems
	Between experts and C/Ps	How is the communication? Any obstacles? Was any measures taken?	They stay in the same room and communications are held almost everyday.
Ownership	Ownership of C/P organization	How is the ownership towards the Project? And why?	Turkish side has strong ownership and promote the Project
Other contributing or preventing factors	—	Are there any factors that are contributing or preventing the implementation process?	Nothing in particular.
Technology Transfer	Planning	Is technology transfer process appropriate?	Technology was transferred through making the 1st version of the plan
	Implementation	Is technology transfer process appropriate?	Technology was transferred through daily support of making textbooks and preparation of training course
	Evaluation	Is technology transfer process appropriate?	Monitoring activities were conducted but not much systematic way
	Making Strategic Planning	Is technology transfer process appropriate?	This is still early stage.

ANNEX 3 Evaluation by Five Criteria

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
Relevance	1.1 Priority	1 Do the Super Goal and the Overall Goal of the Project have conformity with Turkish policy on Economics, Technology and Education?	The Project has conformity with the midterm (2007 to 2009) strategy on development by the Turkish Government.
		2 Do the Super Goal and the Overall Goal of the Project have conformity with Japanese policy on ODA and JICA Priority Plan?	The Project also has conformity with JICA's cooperation program for Turkey. The Project is positioned in Promotion of Industry in the International Competitive Environment, Education and training of the Industry HR program, which is one of the core issues in the program.
	1.2 Necessity	1 Does the Project Purpose have conformity with Turkish policy on Economics, Technology and Education?	TTC is highly expected to play an important role in IAT development in Turkey. Because of the uniqueness of IAT in the Turkish regulatory environment, it is the only one organization which drafts the technological direction and takes the lead in the field. This shows the Project has conformity with the Turkish Social needs.
		2 Does the Project Purpose have conformity with the needs of beneficiaries? ・ Target Group of the Project: Management staff and lecturers of Teachers Training Center (TTC) ・ Indirect Target Group: Teachers to be trained at the TTC." ・ Others: Students of IAT, Companies using IAT, Participants of Summer seminar	Many beneficiaries (CPs in TTC) enjoy widening their knowledge and perspectives. Because of complexity of technology of IAT, the demand for study is very high.
	1.3 Appropriateness of Methodology	1 Strategy, Plan and Approach of the Project 1.1Are they appropriate and match to the local circumstance ・ Basic strategy to achieve the Overall Goal, which is "Vocational education and training (VET) for IAT at the expansion schools is practiced effectively" by establishing Teacher training system of the TTC, which is the annex of Izmir school, not by providing the training directly to the teachers at expansion school. ・ Introduction of Training Management Cycle ・ Standardization and making manual of operational procedure ・ Ownership oriented project promotion ・ Other important strategy, plans and approach, if any 2 Is the current PDM appropriate?	・ Basic strategy to achieve the Overall Goal by establishing Teacher training system of the TTC, which is the annex of Izmir school, not by providing the training directly to the teachers at expansion school : Positioning of TTC is not clear ・ Introduction of Training Management Cycle: Check and Action portion of PDCA (Plan, Do, Check and Action) cycle is weak ・ Standardization and making manual of operational procedure: 1st version of "Teacher Training Manual" is drafted ・ Ownership oriented project promotion Turkish side has strong ownership
		2 Does Japan have advantage in the technologies to be transferred?	Japan have advantage in the technologies to be transferred, because it has lot of experience at technical colleges.

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
		3 Are there any substantial change which could influence the Project in the politics, economics and social environment surrounding the Project?	Current World Wide Economic Crisis: The team has the impression that this will not affect the project a lot, based on the limited number of interview. There are some opinions that this situation will work well for IAT because of its excellence. However, this matter should be observed continuously.
Effectiveness	2.1 Achievement of Project purpose	Will the Project Purpose be achieved by the end of the Project?	T he delay in some outputs has influenced on the achievement, and there is some concern that the achievement level could not be enough by the end of the Project unless the necessary inputs and acceleration of delayed activities have been promoted in the latter half of the Project.
	2.2 Appropriateness of project outputs to achieve the Project Purpose.	Is each Output of the Project contributing to achieving the Project Purpose?	Some delay in the Outputs, especially in Output 2 and 4, have largely influenced on the achievement level of the Project Purpose.
	2.3 The Important Assumption for Outputs to lead the Project Purpose, i.e. "Counterparts remain in TTC"	1 Will the Important Assumption for Outputs to lead the Project Purpose be satisfied? ・ Counterparts remain in TTC 2 Is any other significant important assumptions missing?	Well motivated CPs are assigned and they stay in TTC so far. There is a concern of their tangible motivation.
	2.4 Factors influencing Effectiveness	Are there any factors that are contributing or preventing the achievement of Project Purpose other than Outputs	It is necessary to stabilize the environment of TTC. This includes legal status of TCC, budgetary independence, mission of TTC, positioning of TTC trainers (CPs), and trainees' qualification.
	3.1 Achievement of Project Outputs	①Have Outputs been progressed as planned and will they be achieved by the end of the Project? ②Have Outputs been progressed as Inputs and Activities are implemented?	①Some delay in the Outputs, especially in Output 2 and 4, have largely influenced on the achievement level of the Project Purpose. ②Major Inputs are human resources (HR), operational expenses and equipment. Among these Inputs, HR was very much satisfactory in quality and timing. Experts from Japan are well respected by CPs and CPs are well appreciated by trainees. However, the fact that CPs are not working exclusively for the project have caused some difficulties to carry out the Project activities. Operational expenses are provided, but unclear segmentation of the budget from Izmir school causes some difficulties in utilization of necessary expenses in TTC, which leads to some limitation in the Project activities, such as purchasing consumables and delivering hard-copy of teacher training textbooks to the participants.

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
Efficiency	3.2.The Important Assumptions for Activities to lead the Project Outputs, i.e. "Teachers of IAT Department in the expansion schools are appointed in time and Equipment for IAT departments of expansion schools are prepared at appropriate timing"	1 Will the Important Assumptions for Activities to lead the Project Outputs be satisfied? ・ Teachers of IAT Department in the expansion schools are appointed in time ・ Equipment for IAT departments of expansion schools are prepared at appropriate timing 2. 2 Is any other significant important assumptions missing?	It is getting difficult to find out candidates for IAT department because the position in IAT department doesn't attract many teachers at present. The most critical reason for this is the present regulation on teachers' assignment (department registration) and subject area to teach, which doesn't allow the IAT teachers to teach classes in the fields other than his/her specialty in IAT department. As MoNE put the high priority for equipment budget for the expansion school last year, equipment for IAT departments of expansion schools were prepared at appropriate timing. However there still some equipment are necessary.
	3.3. Relation between Inputs and Outputs	1 Inputs from Turkish side ①Assignment of CPs (timing, duration, number, field, level) ②Other Personnel (timing, duration, number, field, level) ③Land, Office and equipment (timing, amount, quality, management, utilization) ④Project costs (timing, amount, management, utilization)	At the JCC which was held on Feb 27, DGTVE stated that MoNE will keep TTC and its mission to provide the Teacher Training
		2 Inputs from Japanese side ①Long term Experts (timing, duration, number, field, level) ②Short term Experts (timing, duration, number, field, level) ③Counterpart training in Japan (timing, duration, number, field, contents, level, utilization) ④(Portable) Supplemental equipment (timing, amount, items, spec, equipment management, utilization) ⑤Supplemental expenses (timing, amount, management, utilization)	①②Experts are dispatched as planned. Experts from Japan are well respected by CPs ③ 2 CPs had training in Japan as planned ④Portable Supplemental equipment are provided as demanded. In the first year, PCs and peripherals were provided and total amount was JPY1,824,000. In the second year, equipment necessary for making textbook were provided total amount was JPY4,499,000.
	3.4 Communication between stakeholders	①Communication between Experts and CPs ②Communication among CPs ③Communication among Experts ④Communication between Experts and Japanese Domestic Support Team ⑤Communication between Project Team members (Experts and CPs) and MoNE	In general, communication among stakeholders are good. ①Communication between Experts and CPs: They stay in the same room and communications are held almost everyday. ②Communication among CPs: They stay in the same room and communications are held almost everyday. ④Communication between Experts and Japanese Domestic Support Team: Japanese Domestic Support Team helps Experts in technology aspects as required.
	3.5 Factors influencing Efficiency	In addition to the Activities and Inputs, are there any factors which are contributing to or preventing the Efficiency of the Project?	Japanese and Turkish sides recognized the necessity of improving on allocating budget and full-time assigned staff separated from Izmir school

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
Impact	4.1Impact on Overall Goal and Super Goal	1 As the result of achieving the Project, will the Overall Goal and Super Goal be effective?	There is no explicit data available at present to show the indicators for the Goals, and it is too early to judge the achievement of those Goals. However, the interviews to a few companies indicate the related situations as follows; Two companies which accepted the intern students from the IAT department evaluated these students as rich in knowledge, good performance and self-propelled. Other two companies, which had no graduates or intern students, expressed their expectation to the IAT department and eager to employ its graduates because they have wide knowledge and technical skills. These information could be regarded as the positive indication for the achievement of the Goals.
		2 Important Assumptions 2.1 Will the Important Assumption to lead the upper level be satisfied? (Project Purpose to Overall Goal) ・ Entry of students to IAT Department in the expansion schools is kept in the present level at least ・ Number of expansion schools is not reduced (Overall Goal to Super Goal) ・ Turkish industrial sector continue to develop in same growth rate as present ・ Teachers of IAT departments after the training at TTC continue teaching 2.2 Is any other significant important assumptions missing?	The Important Assumption from Overall Goal to Super Goal: About the 1st assumption, influence by the world wide economic crisis seems limited at this moment. About the 2nd Assumption, not all teachers who completed training in TTC are assigned to the IAT department of expansion schools and some teachers left from the IAT department. These situations could be critical to ensure the achievement of the Overall Goal. It is considered there is no substantial problems on the Important Assumption from Project Purpose to Overall Goal.
		3 Are there any factors which are contributing or preventing to achieve the Overall Goal and /or Super Goal?	Some positive impacts are observed already. They are; ・ Experts are well respected by CPs not only for the technology but working habit, attitudes toward job and responsibility. ・ Among the trainees many listed that it was useful to get together and to have chances to exchange the opinions at TTC. ・ Network between TTC trainers and expansion school teachers was established, and TTC become a consulting center for expansion schools Also it is worthwhile to mention that TTC reached such a level that it could conduct a training course to the participants from Republic of Azerbaijan.

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
	4.2 Unexpected impacts	Any unexpected positive or negative influence occurring (including indirect effects)?	Some positive impacts are observed already. They are; ・ Experts are well respected by CPs not only for the technology but working habit, attitudes toward job and responsibility. ・ Among the trainees many listed that it was useful to get together and to have chances to exchange the opinions at TTC. ・ Network between TTC trainers and expansion school teachers was established, and TTC become a consulting center for expansion schools Also it is worthwhile to mention that TTC reached such a level that it could conduct a training course to the participants from Republic of Azerbaijan.
	5.1 Policy Aspect	1 Does MoNE have the policy to keep TTC and its mission to provide the Teacher Training ?	At the JCC which was held on Feb 27, DGTVE stated that MoNE will keep TTC and its mission to provide the Teacher Training
	5.2 Organizational Aspect	2 Will right persons continuously be assigned in order to keep effective results even after the end of the Project?	TTC's future, including positioning of CPs in TTC is not clearly visible or at least not well shared among many stakeholders. Moreover, the fact that CPs are not working exclusively for the project have caused some difficulties to carry out the Project activities.
		3 TTC has or will have the ability to manage and operate the Center by itself by the end of the Project?	MoNE describes under the current law, TTC can not be independent organization. In addition to this TTC does not separate budget nor has clear responsibility and authority. In this circumstance it is difficult for TTC to have the ability to manage and operate the Center by itself by the end of the Project 1st version of "Teacher Training Manual" is drafted.
		4 Is the ownership by the CPs toward the operation of TTC ensured sufficiently?	CPs are well motivated and self-propelled but as positioning of CPs in TTC is not clear. Therefore, it is considered that the ownership by the CPs toward the operation of TTC is not ensured sufficiently.
	5.3 Financial Aspect	1 Is budget allocation enough for TTC to conduct Teacher Training Activities in IAT? 2 Will the budget be secured after the Project?	Budget for TTC is not allocated explicitly. Operational expenses are provided, but unclear segmentation of the budget from Izmir school causes some difficulties in utilization of necessary expenses in TTC, which leads to some limitation in the Project activities, such as purchasing consumables and delivering hard-copy of teacher training textbooks to the participants.

Criteria	Questions		Result of the Study
	Main Question	Sub Question	
Sustainability	5.4 Technology Aspect	1 Capacity of CPs Will CPs gain the ability to plan and implement the Teacher Training Activities in IAT by themselves by the time of the completion of the Project? 1.1 Management cycle activities from planning to check 1.2 Having knowledge on IAT and scheme to brush-up the knowledge 1.3 Learning training method and scheme to use it continuously 1.4 Any additional subjects to improve CPs capacity ?	In general, CPs are gaining the ability to plan and implement the Teacher Training Activities in IAT by themselves. 1.1 Check and Action portion of PDCA (Plan, Do, Check and Action) cycle is weak 1.2 Scheme to brush-up the knowledge is not visible yet 1.3 Training method is not transferred
		2 Sustainability of the Outputs Can TTC keep and continuously utilize the ability of making plans and implementing high-quality training which supposed to be gained through the Project? 2.1 Planning capacity of teacher training program 2.2 Implementation capacity of teacher training courses 2.3 Evaluation capacity for teacher training 2.4 Planning capacity of long term organizational strategy	How to keep the technology transferred to TTC CPs is the strong concern. How to sustain and brush up the technology is another subject to be considered. 1st version of "Teacher Training Manual" is drafted.
		3 Operation and maintenance scheme of equipment 3.1 Is operation and maintenance scheme of equipment established so that CPs have the ability to operate and maintain? 3.2 Is the budget to get consumables and spare parts of equipment enough and will be continuously reserved?	3.1 There is no manual to show operation and maintenance scheme of equipment established. 1st version of "Teacher Training Manual" is drafted. 3.2 Unclear segmentation of the budget from Izmir school causes some difficulties in utilization of necessary expenses in TTC, which leads to some limitation in the Project activities, such as purchasing consumables and delivering hard-copy of teacher training textbooks to the participants.
	5.5 Social, Cultural and Environmental Aspect	Is there anything about social, cultural and environmental aspects which should be aware of for the Sustainability of the Project?	Nothing in particular
	5.6 Promoting or Preventing Factor	Are there any positive and /or negative causes which could influence the sustainability of the Project's effect?	Nothing in particular

ANNEX 4-1

List of Necessary Equipments for TTC Group 1

No.	Name	Property		Quantity Needed For Textbook writing	Approximate Prices		Related Teacher Textbooks	Quantity Needed For Teacher Training
					TL	USD		
1	Power Electronic Traning Set			1	3.000,00	1.851,85	EE-1001Analog Electronic, EE-1002 Digital Electronics, CS-1201 Actuator II	10
2	Analog Digital Electronic Training Set			1	1.500,00	925,93		10
3	Electro-Hydrolic Set			1	30.000,00	18.518,52	CS-1101 Actuator I, CS-1201 Actuator II	1
4	Surface Grinning Machine		200x400mm	1	33.000,00	20.370,37	ME-1001 Machine Tool, FA-1204 Automatic Production	1
5	CAD-CAM Program	Solidworks-SolidCAM		1	(to be found later)	(to be found later)	ME-1101 Cad	21
6	Circuit Design Software	Proteus		1	2.100,00	1.296,30	EE-1101 Computer Aided Circuit Design	21
7	Embedded System Card			1	560,00	350,00		10
8	Embedded System Card Cable (ARM-USB-OCD)			1	210,00	130,00		10
9	Motion Control Card	Advantech	Three axis	1	1.500,00	925,93		10
10	Usb Control Cards	PIC18F2550		1	480,00	300,00	CC-1201 Advanced Computer Control	21
11	Touch Panel	Omron, NS201		1	1.500,00	925,93		10
12	Flow Meter	(Purchas at Japan)		1	390,00	243,80		5
13	Flow Meter Display	(Purchas at Japan)			755,00	465,50		5
14	DS-PIC Pogrammer			1	(to be found later)	(to be found later)		10
15	Brushless Dc Motor Set			1	850,00	524,69		6
16	Servo Motor Set	Omron		1	1.834,20	1.132,22	CS-1201 Actuator-II (Motor Control)	6
17	DC Servo Motor Set			1	1.600,00	987,65		4
18	Automatic Control Training set	SMC IPC 200	with open loop,close loop,PID	1	160.000,00	98.765,43	CS-1202 Automatic Control, EE-1102 Sensor and Digital Control	1
19	CNC Lathe		Max turning diameter 410 mm Max. Turning length 290 mm X axis travel 235 mm Z axis travel 310 mm Spindle speed range 45-4500 min-1	1	69.000,00	42.592,59		1
20	CNC Milling		Travel X:500 mm Y:400 mm Z: 300 mm Spindle speed range 100-8000 min-1 Mass of machine 2500kg	1	69.000,00	42.592,59	FA-1204 Automatic Production	1
21	Scada Software	WinCC		1	5.000,00	3.086,42		21
22	Scada Software	CX-Supervisor		1	5.000,00	3.086,42		21
23	PLC Software for Omron	CX One		1	3.000,00	1.851,85		21
24	PLC Software for Siemens	Symatic S7		1	1.500,00	925,93		21
25	Ethernet Module for Omron			1	1.600,00	987,65		6
26	OPC Server for Siemens and Mitsubishi	KepServer		1	1.300,00	802,47	FA-1202 SCADA Systems, CC-1101 PLC	21
27	Device Net Interface Unit	Omron		1	7.420,00	4.580,25		6
28	Siemence PLC Parts and Cables(CPU314-DP)	Siemence		1	854,91	527,72		20
29	Profibus Module for Omron	PRM21		1	1.300,00	802,47		6
30	Profibus Cable and Sockets for Omron			1	1.000,00	617,28		12
31	Positioning Control Unit for Omron	NC413		1	2.000,00	1.234,57		4
32	Factory Automation set	SMC FMS 200 (10 Modules+2 Transfer system)	FMS 201 Body supply	1	509.000,00	314.197,53	FA-1203 Moduler Assembly System	1
33			FMS 202 Bering selection (about $30.000(w/tax))	1				
34			FMS 203Hydraulic press	1				
35			FMS 204 Shaft selection	1				
36			FMS 205 Cover selection	1				
37			FMS 206 Screw supply	1				
38			FMS 207 Robotized screwing	1				
39			FMS 208 Storage	1				
40			FMS 209 Paint drying oven	1				
41			FMS 210 Quality control	1				
42			Transfer system Linear	1				
43			Transfer system Modular	1				
44	Factory Automation Experiment Parts and Units	One Set		1	15.004,00	9.377,69		1
45	Relay PLC Transition Set	SMC Automate 200		1	23.000,00	14.197,53		1
46	Packaging Machine			1	76.000,00	46.913,58		1
47	Business Automation Set	Gasolin Station Automation		1	6.500,00	4.012,35	FA-1205 Business Automation	1
48	Business Automation Set	GreenHouse Automation		1	(to be found later)	(to be found later)		1
49	PIC Training SET	16F877		1	350,00	216,05		20
50	Controler and PIC Miscelleous Parts and Equipments	One Set	DC Motors, Step Motor, A/D, D/A circuits, Communication Parts	1	3.000,00	1.851,85	CC-1201 Microcontroller II	20
				Total	1.040.108,11 TL 26.468,11 TL	$\642.168,91 $\16.457,18		Total

ANNEX 4-2

List of Necessary Equipments for TTC Group 2

No.	Name	Property		Quantity Needed For Teacher Training	Approximate Prices for Teacher Traning	
					TL	USD
1	Power Electronic Traning Set			10	30.000,00	18.518,52
2	Analog Digital Electronic Training Set			10	15.000,00	9.259,26
3	Electro-Hydrolic Set			1	30.000,00	18.518,52
4	Surface Grinning Machine		200x400mm	1	33.000,00	20.370,37
5	CAD-CAM Program	Solidworks-SolidCAM		21	(to be found later)	(to be found later)
6	Circuit Design Software	Proteus		21	44.100,00	27.222,22
7	Embedded System Card			10	5.600,00	3.500,00
8	Embedded System Card Cable (ARM-USB-OCD)			10	2.100,00	1.300,00
9	Motion Control Card	Advantech	Three axis	10	15.000,00	9.259,26
10	Usb Control Cards	PIC18F2550		21	10.080,00	6.300,00
11	Touch Panel	Omron, NS201		10	15.000,00	9.259,26
12	Flow Meter	(Purchas at Japan)		5	1.950,00	1.219,00
13	Flow Meter Display	(Purchas at Japan)		5	3.775,00	2.327,50
14	DS-PIC Pogrammer			10	(to be found later)	(to be found later)
15	Brushless Dc Motor Set			6	5.100,00	3.148,15
16	Servo Motor Set	Omron		6	11.005,20	6.793,33
17	DC Servo Motor Set			4	6.400,00	3.950,62
18	Automatic Control Training set	SMC IPC 200	with open loop,close loop,PID	1	160.000,00	98.765,43
19	CNC Lathe		Max turning diameter 410 mm Max. Turning length 290 mm X axis travel 235 mm Z axis travel 310 mm Spindle speed range 45-4500 min-1	1	69.000,00	42.592,59
20	CNC Milling		Travel X:500 mm Y:400 mm Z: 300 mm Spindle speed range 100-8000 min-1 Mass of machine 2500kg	1	69.000,00	42.592,59
21	Scada Software	WinCC		21	105.000,00	64.814,81
22	Scada Software	CX-Supervisor		21	105.000,00	64.814,81
23	PLC Software for Omron	CX One		21	63.000,00	38.888,89
24	PLC Software for Siemens	Symatic S7		21	31.500,00	19.444,44
25	Ethernet Module for Omron			6	9.600,00	5.925,93
26	OPC Server for Siemens and Mitsubishi	KepServer		21	27.300,00	16.851,85
27	Device Net Interface Unit	Omron		6	44.520,00	27.481,48
28	Siemence PLC Parts and Cables(CPU314-DP)	Siemence		20	17.098,20	10.554,44
29	Profibus Module for Omron	PRM21		6	7.800,00	4.814,81
30	Profibus Cable and Sockets for Omron			12	12.000,00	7.407,41
31	Positioning Control Unit for Omron	NC413		4	8.000,00	4.938,27
32	Factory Automation set	SMC FMS 200 (10 Modules+2 Transfer system)	FMS 201 Body supply	1	509.000,00	314.197,53
33			FMS 202 Bering selection (about $30,000(w/tax))			
34			FMS 203Hydraulic press			
35			FMS 204 Shaft selection			
36			FMS 205 Cover selection			
37			FMS 206 Screw supply			
38			FMS 207 Robotized screwing			
39			FMS 208 Storage			
40			FMS 209 Paint drying oven			
41			FMS 210 Quality control			
42			Transfer system Linear			
43			Transfer system Modular			
44	Factory Automation Experiment Parts and Units	One Set		1	15.004,00	9.377,69
45	Relay PLC Transition Set	SMC Automate 200		1	23.000,00	14.197,53
46	Packaging Machine			1	76.000,00	46.913,58
47	Business Automation Set	Gasolin Station Automation		1	6.500,00	4.012,35
48	Business Automation Set	GreenHouse Automation		1	(to be found later)	(to be found later)
49	PIC Training SET	16F877		20	7.000,00	4.320,99
50	Controler and PIC Miscelleous Parts and Equipments	One Set	DC Motors, Step Motor, A/D, D/A circuits, Communication Parts	20	60.000,00	37.037,04
				Total	1.653.432,40 TL	$1.020.890,49

ANNEX-5

TTC Course Schedule Until the Completion of SPREAD Project	
Date	**Name of Course**
23 March- 17 April 2009	IAT Course (Mechatronic Advanced Level 1)
27 April - 29 May 2009	IAT Course (Industrial Electronics Advanced Level 1)
28 September - 6 October 2009	IAT Course (Mechatronic Advanced Level 2)
28 September - 6 October 2009	IAT Course (Mechatronic Basic Level 1)
28 September - 6 October 2009	IAT Course (Industrial Electronics Basic Level 1)
16 November - 18 December 2009	IAT Course (Industrial Electronics Advanced Level 2)
16 November - 18 December 2009	IAT Course (Mechatronic Basic Level 2)
16 November - 18 December 2009	IAT Course (Industrial Electronics Basic Level 2)
22 March- 16 April 2010	IAT Course (Mechatronic Advanced Level 1)
22 March- 16 April 2010	IAT Course (Industrial Electronics Advanced Level 1)
26 April - 21 May 2010	IAT Course (Mechatronic Advanced Level 2)
26 April - 21 May 2010	IAT Course (Industrial Electronics Advanced Level 2)

Basic Level Course

Advanced Level Course