

Problem Statement



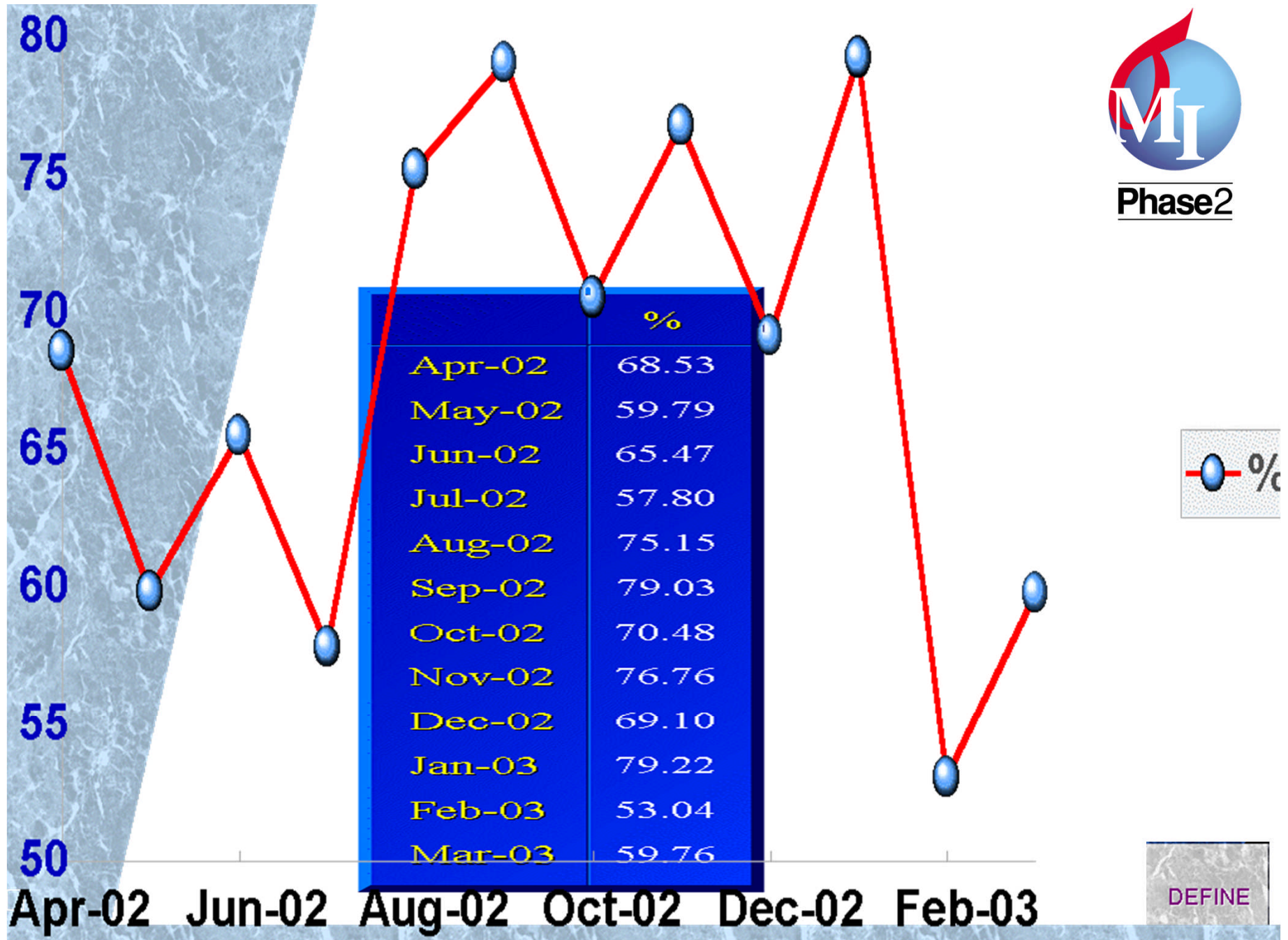
Phase2

- ◆ Pareto Principle advocates that Majority (80%) of the profit would come from Minority(20%) of the customer. Sustaining it becomes vital to edge competition. There is a changing need & we have to analyse the trend & status of these niche products (PJCTV/Plasma CTV); then focus priority service to this targetted customer. This is because when customer perceives the level of service slips, they would slip away too

DEFINE



Phase2





4/15/03 7/13/03

DEFINE

10 Days

MEASURE

20 Days

ANALYSE

20 Days

IMPROVE

20 Days

CONTROL

20 Days

CLOSE



Gantt Chart

DEFINE



Objective:

To increase customer satisfaction level by improving the repair speed (TART) for all PJCTV/Plasma CTV to be completed within 1 days for > 90% of the repair.

Metric:

Lead time = within 1 days for > 90% of the repair

DEFINE



Soft Savng

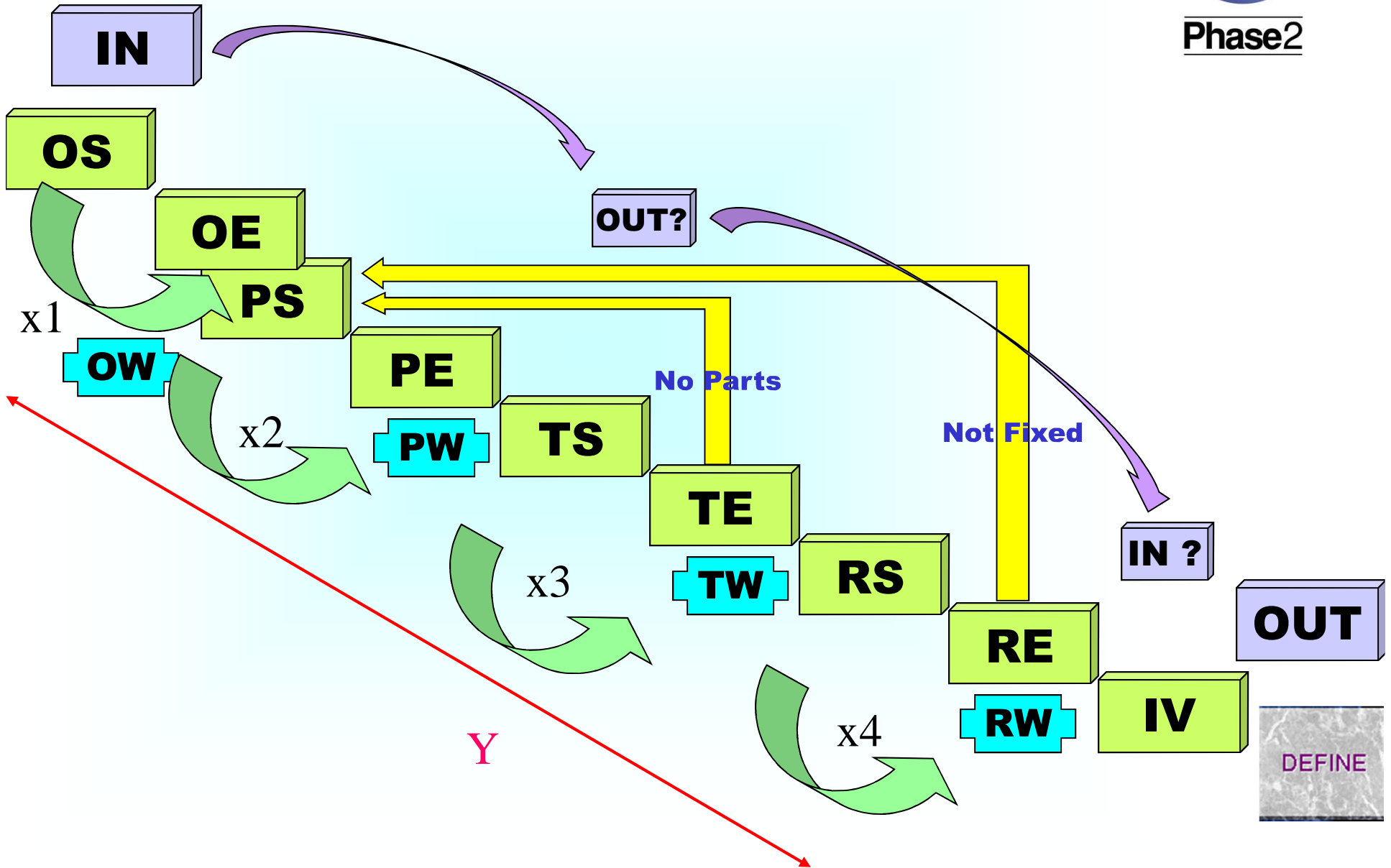
1. Improve Market Share
2. Repeated Sales &
3. Overall Productivity
4. Opportunity cost of lost customer loyalty
5. Lost sales owning poor quality
6. Manhour saved expediting & handling complain

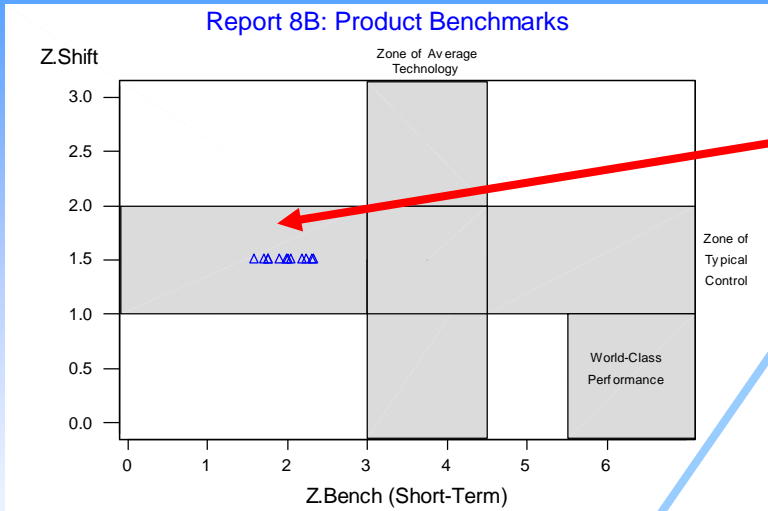
Pain

Unable to sustain profitability & concerns company survival

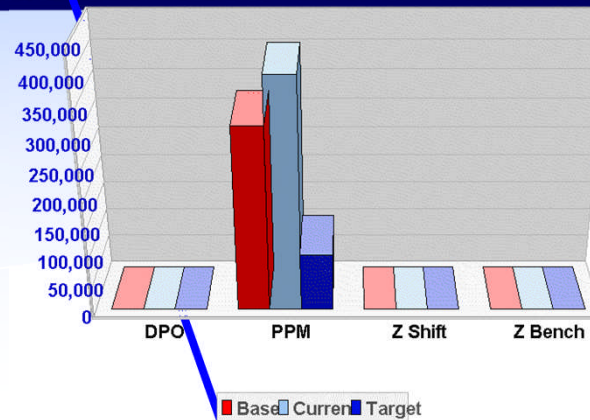
DEFINE

TAOSC Process Flow

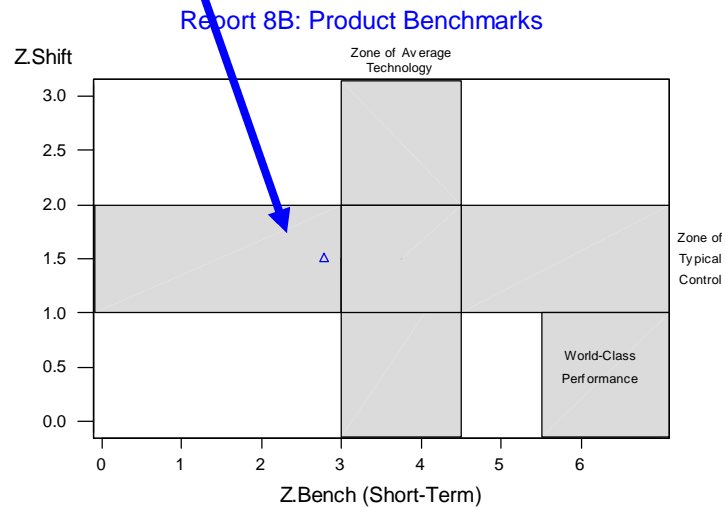
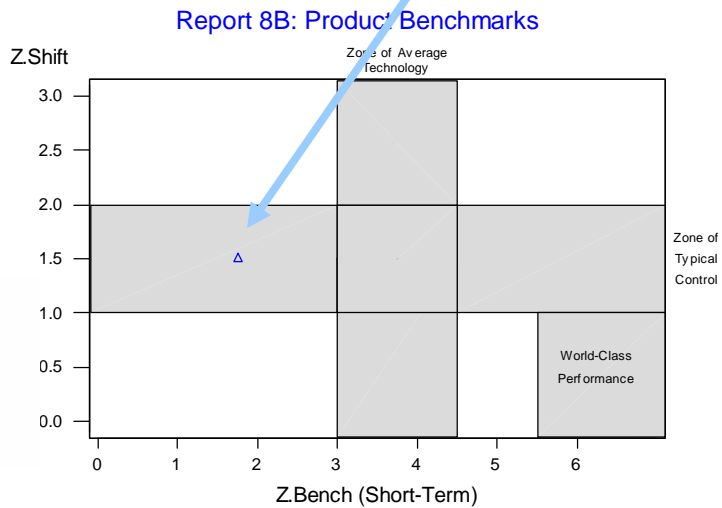




	DPO	PPM	Z Shift	Z Bench
Base	0.31568	321,558	1.5	1.963
Current	0.4024	402,400	1.5	1.747
Target	0.1	100,000	1.5	2.782

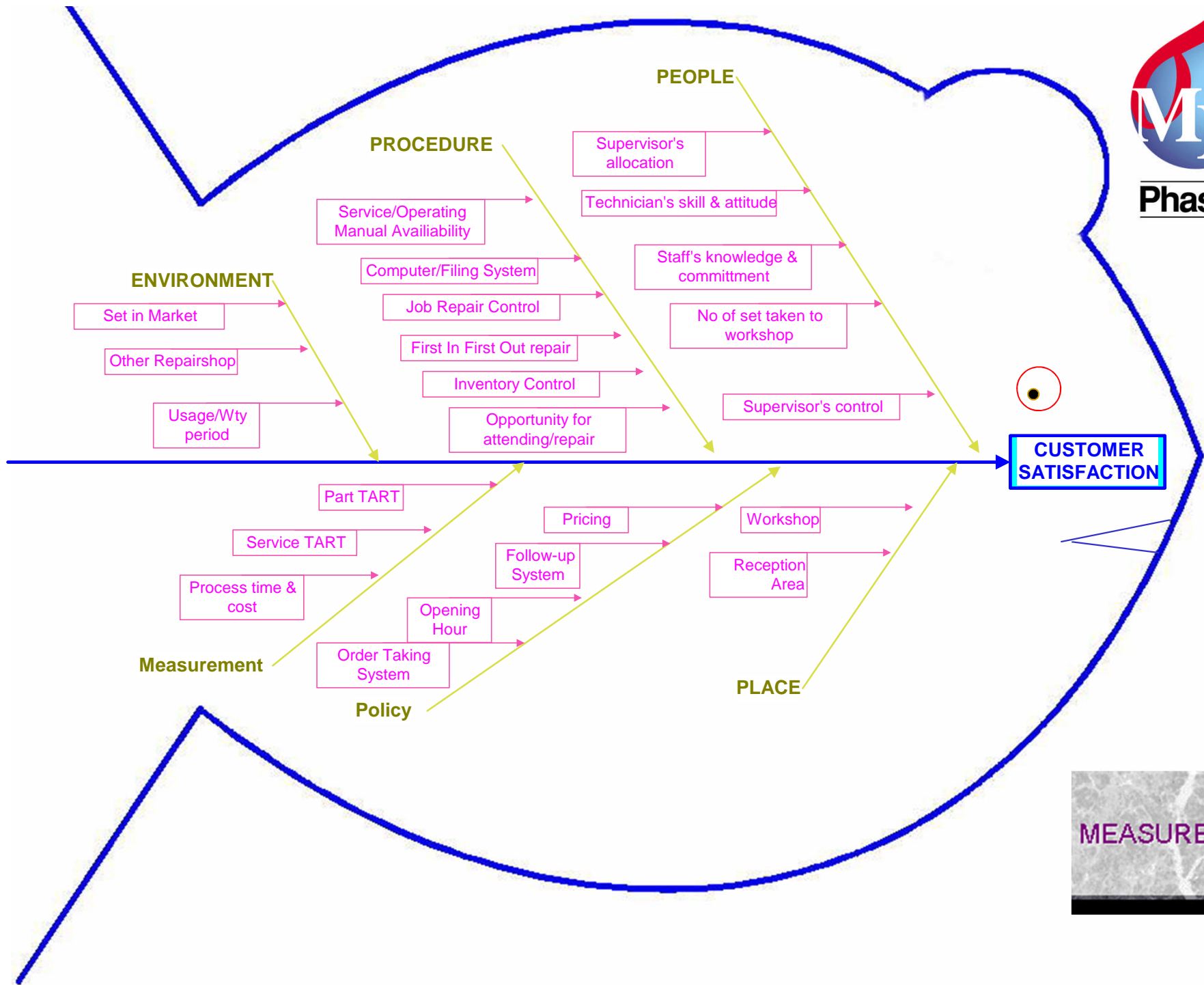


Checking the defect status





Phase2



C&E Matrix



	Important to customer						
	9	7	4	1	1		
	Repair Delay	Part Availability	Staff Consistency	Quotation Approval	Document Availability		
Input Process							
Pricing	4	1	1	9	1	54	
Follow-up Policy	7	4	4	7	4	114	4
Operating Manual	4	1	1	1	4	52	
Supervisor's allocation	9	7	7	1	1	120	3
Technician's skill	7	4	4	1	1	109	5
Staff's knowledge	4	1	1	1	1	49	
Staff's commitment	1	1	4	7	4	43	
Staff's accuracy (I/P)	4	1	4	1	4	64	
Job Repair Control	9	7	7	4	1	163	2
Inventory Control	9	9	7	1	1	174	1
Workshop space	1	1	1	1	1	22	
Reception ambient	1	1	1	1	1	21	
Usage Period	1	1	1	1	1	22	
Other Repairshop(No:)	1	1	1	1	1	22	
Filing System	1	1	1	4	9	57	

FMEA



	Potential Failure Mode	Potential Failure Effect	SEV	Potential Cause	OCC	Current Control	Recommendation	DET	RPN	Actions Recommended
Follow-up Policy										
Technician	Job Sheet Delay Submission	Computer Input Delay	6	Unaware of importance/lack commitment	6	No control	SOP	7	252	
Staff	Collection Delay	Computer Input Delay	6	Unaware of importance/lack commitment	6	No control	SOP	7	252	
Supervisor	Approval Follow-up	Approval Delay	6	No checking/Inconsistency in checking	6	No control	SOP	7	252	
Supervisor's Job Allocation	Not FIFO Repair	Technician select repair	9	Lack of Monitoring	9	No control	SOP	6	486	
Technician's Skill	Wrong Diagnostic	Wrong Part Changed/Pending Repair	6	Tech Skill insufficient	6	Subjective Judgement by supervisor	Test & Training	6	216	
Job Repair Control	Job Flow Delay	Missing Document/Miss Opportunity	8	System inefficiency	6	JRCSystem/No supervisor Control	Study improvement	7	336	
Inventory Control	Part Unavailability	Repair Opportunity	9	Vendor Inefficiency/Order System weak	8	Inventory Control System/Buffer Stock	Study improvement	7	504	

Summary for Measure Stage



A) Had identify 15 X's for C&E Matrix and after brainstorming had selected 5 X's for FMEA

B) From FMEA, 3 vital X's identified was as follows:-

Supervisor's allocation:

- SOP & Computer

Inventory Control:

- Study Improvement

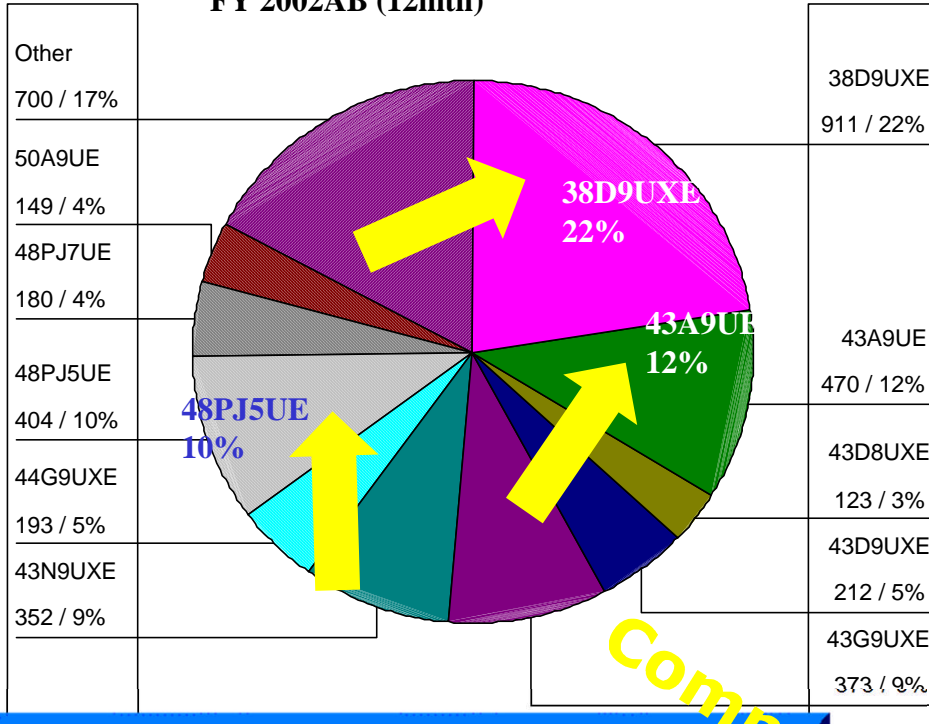
Job Repair Control:

- Incorporate Supervisor Control

C) Checking the Current Capacity: $Z_{\text{shift}} = 1.5$ $Z_{\text{bench}} = 1.747$ it 's require to analyze into changing the current procedure and SOP/MIS/ Human Behaviour in order to the obtain set Target.



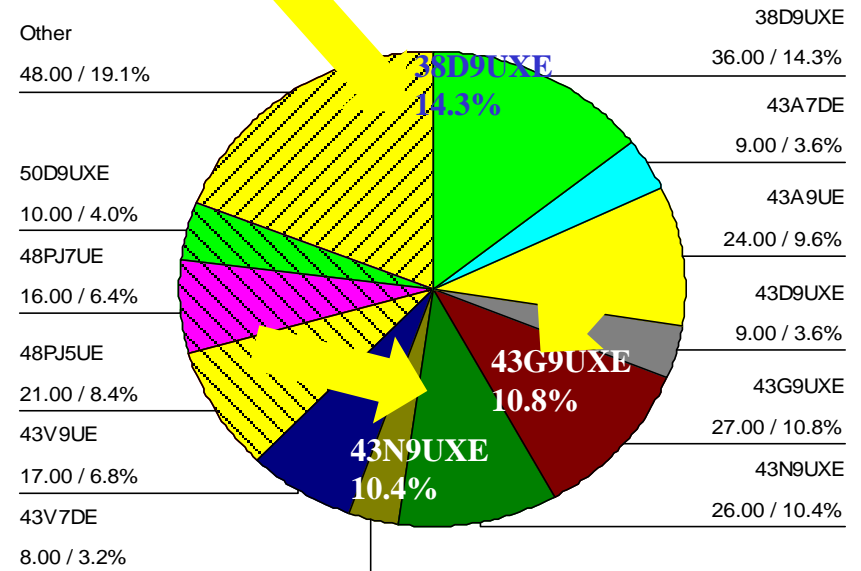
FY 2002AB (12mth)



Comparing

Period	Model	Qty	%
FY 2002AB	38D9UXE	911	22
FY 2002AB	43A9UE	470	12
FY 2002AB	48PJ5UE	193	10
3/1/03	38D9UXE	36	14.3
3/1/03	43G9UXE	27	10.8
3/1/03	43N9UXE	26	10.4

March 2003



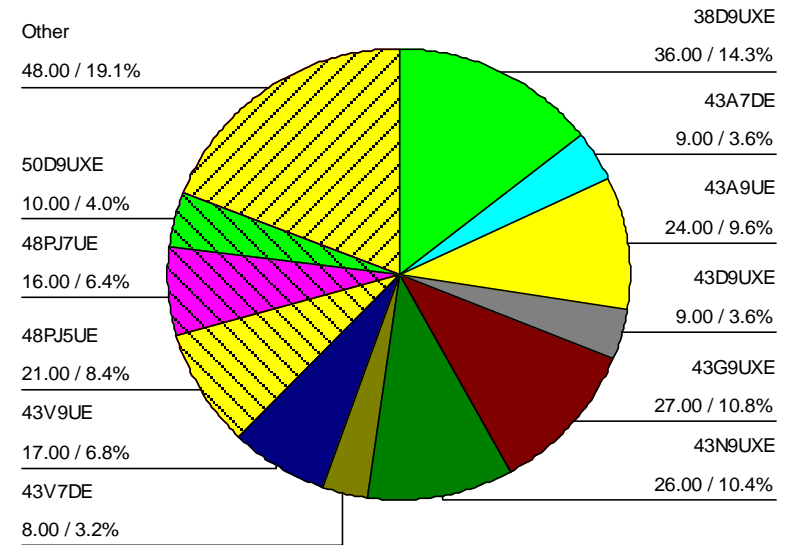
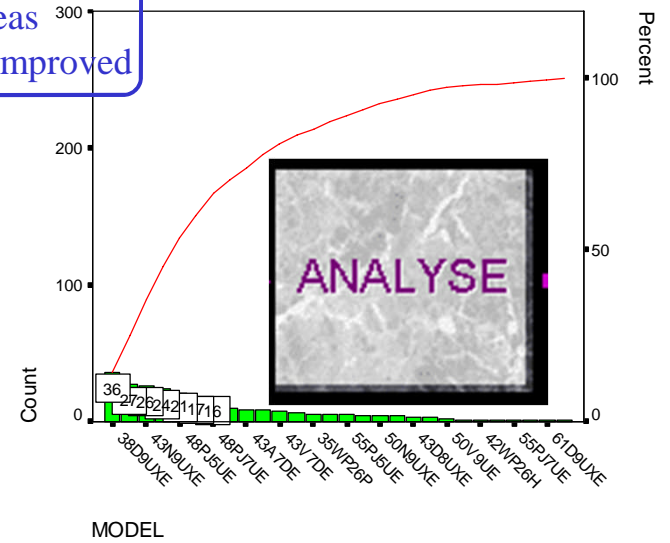


MODEL * TART Crosstabulation(Mar 2003)

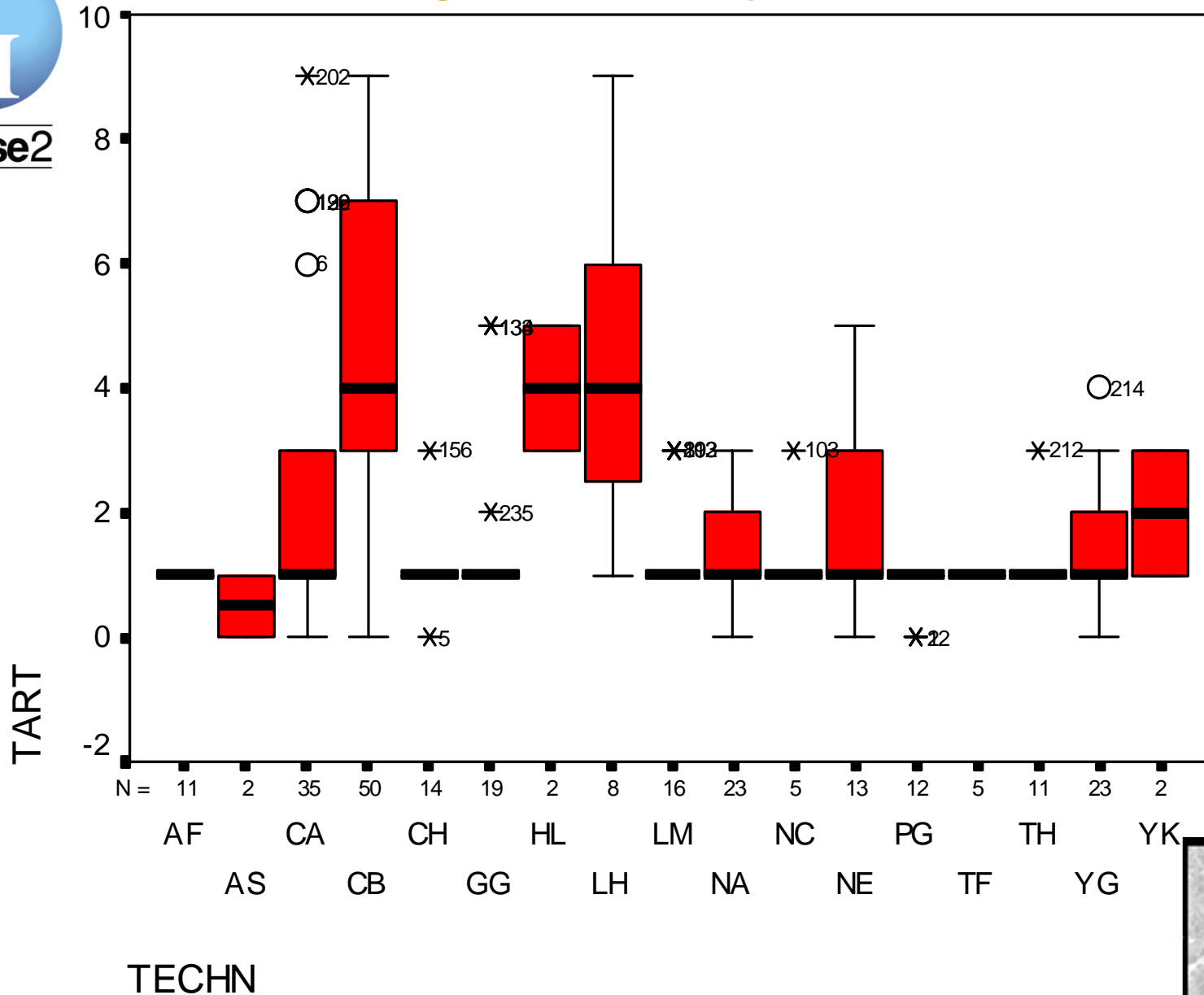


These are areas that can be improved

MODEL	TART										Total	
	0	1	2	3	4	5	6	7	8	9		
35WP26P		3			1					1		5
38D9UXE	2	22	4	2	2	3	1					36
42PW26H				1								1
42WP26H		1										1
43A7DE	1	3		2			1		1	1		9
43A9UE		10		4	6	2		2				24
43D8UXE	1	1					1					3
43D9UXE	2	5			1	1						9
43G9UXE		16		10		1						27
43N9UXE		21		1						4		26
43V7DE		5		3								8
43V9UE	2	7	1	3			2		2			17
44G9UXE		2	1				2					5
44N9UXE		1										1
48PJ5UE	3	13	3			1		1				21
48PJ7UE	1	8	6		1							16
50A9UE		2					1		1			4
50D9UXE		7		1					2			10
50G9UXE		3										3
50N9UXE	1	1	2									4
50V9UE	1			1								2
55PJ5UE				2	2	1						5
55PJ7UE		1										1
56PW5UE		1		2				2		1		6
61A9UE		1										1
61D9UXE	1											1
61PJ5UE		3		1								4
61PJ7UE			1									1
Total	15	137	18	33	13	9	8	5	6	7		251



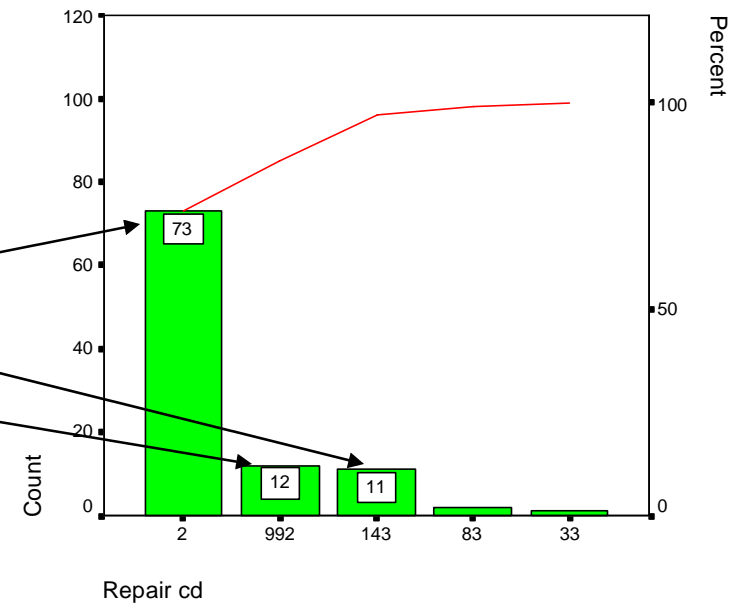
Checking BoxPlot of Tech Vs TART

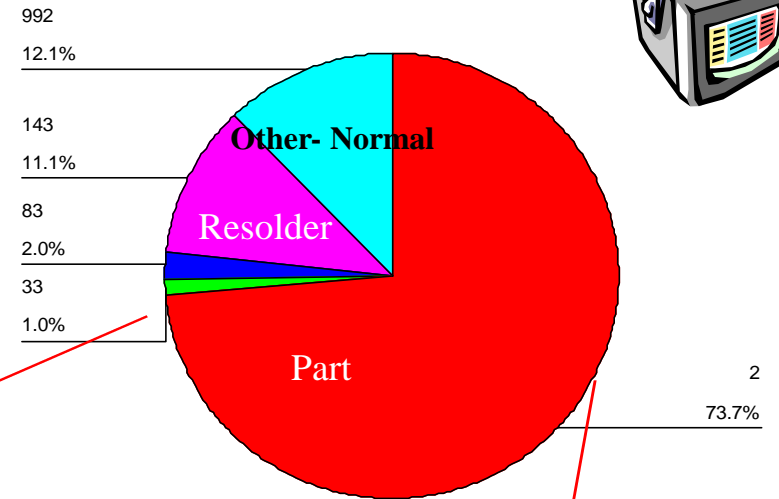




Repair cd * TART Crosstabulation (2 & >day)

Count		TART								Total
		2	3	4	5	6	7	8	9	
Repair cd	2	16	20	10	8	7	3	5	4	73
	33		1			1				1
	83		1							2
	143	1	3	3			1	3		11
	992	1	8		1		2			12
Total		18	33	13	9	8	5	6	7	99





TART * TECHN Crosstabulation (Part code 2 & Tart 2 > days)

Count	TART	TECHN										Total	
		CA	CB	CH	GG	HL	LH	LM	NA	NE	YG		YK
2	2	4	8		1		1				2		16
3	3	3	5	1				1	5		4	1	20
4	4		6				2			1	1		10
5	5		4		2	1				1			8
6	6	1	4					2					7
7	7	2	1										3
8	8		5										5
9	9		4										4
	Total	10	37	1	3	1	5	1	5	2	7	1	73

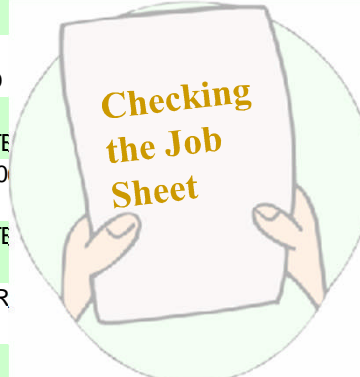


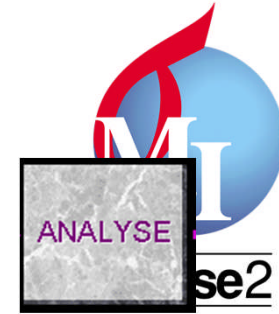


Phase2



Job No	Part	Model	Part No	Part desc	Serial no	Sym cd	Sym desc	Repair cd	Repair desc	Techn
H0403556	9	43N9UXE	23118188	DIODE, 1Z6.2	71661956	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403556	9	43N9UXE	23144867	FUSE, 4A, 250V	71661956	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403556	9	43N9UXE	23905084	IC, STR-S6709, LF953	71661956	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403556	9	43N9UXE	24092341	CAPACITOR,CERAMIC,470PF,2KV	71661956	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403685	8	50D9UXE	23148757	MODULE, CONVER50, CM50DP30I	20662154	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403685	8	50D9UXE	23905094	IC, STK392-110	20662154	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403738	8	50A9UE	23148794	MODULE, TEXT, M-TEXT-P2S	84662886	A10	ABNORMAL OPERATION	2	REPLACE PART(S) - NORMAL	CB
H0403939	8	43V9UE	23000725	IC, NJM2700L			NO AUDIO	2	REPLACE PART(S) - NORMAL	CB
H0403939	8	43V9UE	23009142	IC, NJM1136D			NO AUDIO	2	REPLACE PART(S) - NORMAL	CB
H0404056	7	48PJ5UE	23148323	MODULE, MVCS45D			POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CB
H0403113	6	43A7DE	23000928	IC, SLA4501M			POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CB
H0404005	6	50A9UE	23148794	MODULE, TEXT, M-TE			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0404424	6	43V9UE	23144450	PROTECTOR, PRF20			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0404424	6	43V9UE	23316254	DIODE, ERC06-15			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403743	5	43A9UE	23148794	MODULE, TEXT, M-TE			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0404125	5	43D9UXE	23905094	IC, STK392-110			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403298	5	43A9UE	23135028	IC, STR-Z4479, HYBR			DEAD	2	REPLACE PART(S) - NORMAL	CB
H0404468	5	43G9UXE	23905094	IC, STK392-110			NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403930	4	55PJ5UE	23904247	IC, STR-S6708			DEAD	2	REPLACE PART(S) - NORMAL	CB
H0403930	4	55PJ5UE	24669470	CAPACITOR, 47MFD, 50V	70251323	A09	DEAD	2	REPLACE PART(S) - NORMAL	CB
H0404324	4	43A9UE	23135004	IC, STR83145A(LF501)	63661909	A09	DEAD	2	REPLACE PART(S) - NORMAL	CB
H0404324	4	43A9UE	23135028	IC, STR-Z4479, HYBRID	63661909	A09	DEAD	2	REPLACE PART(S) - NORMAL	CB
H0404324	4	43A9UE	23144479	PROTECTOR, AC125V 4.0A, PRF4	63661909	A09	DEAD	2	REPLACE PART(S) - NORMAL	CB
H0404324	4	43A9UE	23316325	DIODE, UZ9.1BSC	63661909	A09	DEAD	2	REPLACE PART(S) - NORMAL	CB
H0403994	3	43A7DE	23148780	MODULE, MDCC01	31661142	A32	NOTHING FAULTY	2	REPLACE PART(S) - NORMAL	CB
H0403994	3	43A7DE	23786673	PC BOARD ASSY, TEXT, PD0263	31661142	A32	NOTHING FAULTY	2	REPLACE PART(S) - NORMAL	CB
H0404638	3	43V7DE	23144450	PROTECTOR, PRF2000, 125V, 2.0	99660151	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0404638	3	43V7DE	23314955	TRANSITOR, 2SD2553(FA)	99660151	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0404638	3	43V7DE	23316254	DIODE, ERC06-15	99660151	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	A6000050	TRANSISTOR, RN1005	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	A6002050	TRANSISTOR, RN1205	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	23114432	TRANSISTOR, 2SC1815-GR	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	23118188	DIODE, 1Z6.2	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	23144867	FUSE, 4A, 250V	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403514	2	48PJ7UE	23905084	IC, STR-S6709, LF953	94661343	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	CB
H0403719	2	50N9UXE	23192940	ANODECAP ASSY, TCCP5157	48661723	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CB
H0403719	2	50N9UXE	23797152	PICTURE TUBE ASSY, COUPLING	48661723	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CB





Job NO	Tar	Model	Part No	Part desc	Serial no	Sym cd	Sym desc	Repair cd	Repair desc	Techn
H0404179	7	56PW5UE	24073038	CAPACITOR, ELECTROLYTIC,	49251436	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA
H0404179	7	56PW5UE	24669101	CAPACITOR, 100MFD, 50V	49251436	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA
H0403670	6	38D9UXE	23708232	PC BOARD ASSY, RGB D, PBE	20733224	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA
H0404286	3	38D9UXE	23588622	LAMP UNIT	64738112	A44	LAMP REPLACEMENT(W	2	REPLACE PART(S) - NORMAL	CA
H0404566	3	55PJ5UE	23144832	FUSE, 2.0A, 250V	37251930	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA
H0404566	3	55PJ5UE	23905094	IC, STK392-110	37251930	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA
H0403953	2	61PJ7UE	23837499	SCREEN, LENTICULAR SHEET	0	A02	DEFORMED	2	REPLACE PART(S) - NORMAL	CA
H0404962	2	38D9UXE	23588622	LAMP UNIT	60735092	A40	LAMP REPLACEMENT GE	2	REPLACE PART(S) - NORMAL	CA
H0405029	2	38D9UXE	23144610	PROTECTOR, DC60V, 6.3A	37730029	A09	DEAD	2	REPLACE PART(S) - NORMAL	CA
H0405030	2	38D9UXE	23588622	LAMP UNIT	70730049	B05	POOR PICTURE QUALITY	2	REPLACE PART(S) - NORMAL	CA

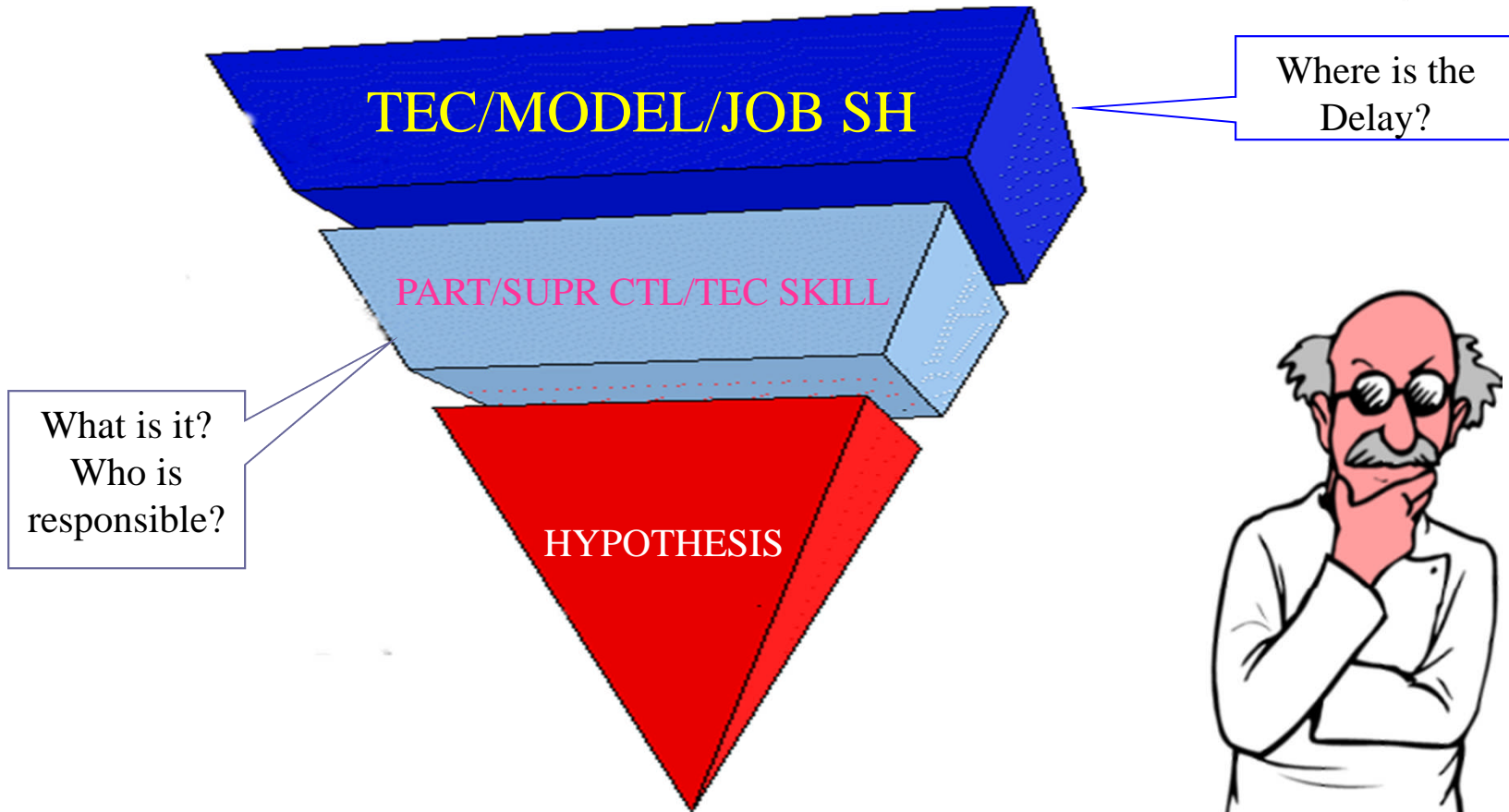
Job NO	Tar	Model	Part No	Part desc	Serial no	Sym cd	Sym desc	Repair cd	Repair desc	Techn
H0404889	4	48PJ7UE	23123922	ANTENNA DIVIDER, 2D1CH, DAE123	92660132	B03	NO PICTURE	2	REPLACE PART(S) - NORMAL	YG
H0404249	3	43G9UXE	23118188	DIODE, 1Z6.2	51661746	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG
H0404249	3	43G9UXE	23144870	FUSE, 2A, 250V	51661746	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG
H0404249	3	43G9UXE	23905084	IC, STR-S6709, LF953	51661746	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG
H0404249	3	43G9UXE	24092341	CAPACITOR,CERAMIC,470PF,2KV	51661746	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG
H0404692	2	48PJ5UE	23905094	IC, STK392-110	22250533	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG
H0404692	2	48PJ5UE	24617912	CAPACITOR,ELECTROLYTIC,2.2MFC	22250533	A09	DEAD	2	REPLACE PART(S) - NORMAL	YG

Job NO	Tar	Model	Part No	Part desc	Serial no	Sym cd	Sym desc	Repair cd	Repair desc	Techn
H0404260	3	43G9UXE	23144870	FUSE, 2A, 250V	34661110	A09	DEAD	2	REPLACE PART(S) - NORMAL	NA
H0404260	3	43G9UXE	23904998	IC, HIC1016	34661110	A09	DEAD	2	REPLACE PART(S) - NORMAL	NA
H0404260	3	43G9UXE	23905084	IC, STR-S6709, LF953	34661110	A09	DEAD	2	REPLACE PART(S) - NORMAL	NA
H0404260	3	43G9UXE	24092341	CAPACITOR,CERAMIC,470PF,2	34661110	A09	DEAD	2	REPLACE PART(S) - NORMAL	NA
H0404260	3	43G9UXE	24546109	FUSIBLE RESISTOR, 1 OHM, 1.	34661110	A09	DEAD	2	REPLACE PART(S) - NORMAL	NA

Focusing towards the Root Cause



Phase2



IMPROVE

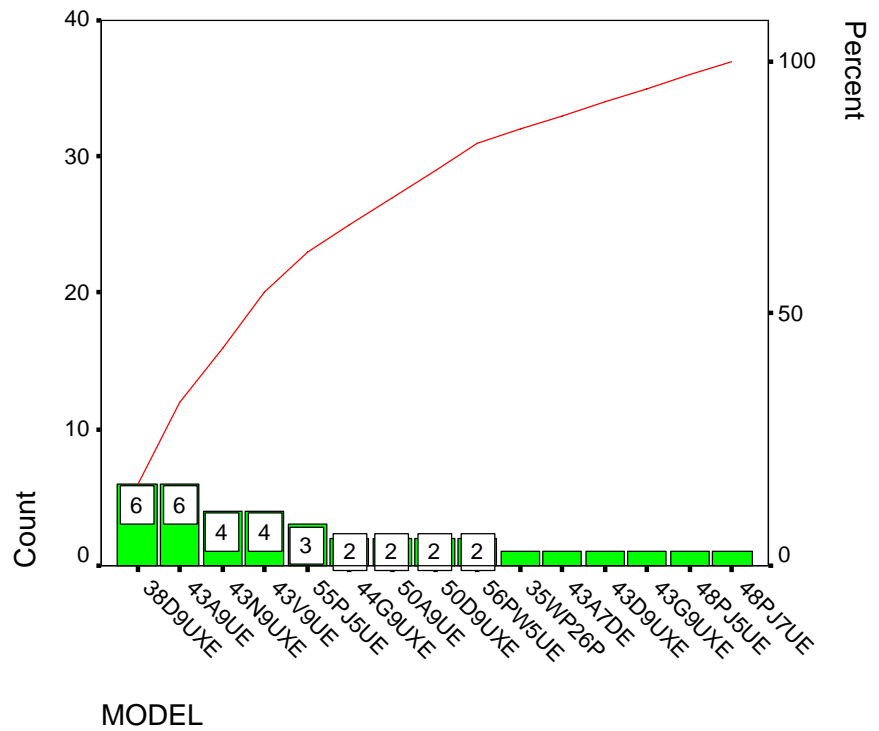
Job NO	Part	Model	Part No	Part desc	Serial no	Sym cd	Sym desc
H0403556	9	43N9UXE	23118188	DIODE, 1Z6.2	71661956	B03	NO PICTURE
H0403556	9	43N9UXE	23144867	FUSE, 4A, 250V	71661956	B03	NO PICTURE
H0403556	9	43N9UXE	23905084	IC, STR-S6709, LF953	71661956	B03	NO PICTURE
H0403556	9	43N9UXE	24092341	CAPACITOR,CERAMIC,470PF	71661956	B03	NO PICTURE
H0403685	8	50D9UXE	23148757	MODULE, CONVER50, CM50C	20662154	B03	NO PICTURE
H0403685	8	50D9UXE	23905094	IC, STK392-110	20662154	B03	NO PICTURE
H0403738	8	50A9UE	23148794	MODULE, TEXT, M-TEXT-P2S	84662886	A10	ABNORMAL OPERATION
H0403939	8	43V9UE	23000725	IC, NJM2700L	83663660	B26	NO AUDIO
H0403939	8	43V9UE	23009142	IC, NJM1136D	83663660	B26	NO AUDIO
H0404179	7	56PW5UE	24073038	CAPACITOR, ELECTROLYTIC	49251436	B05	POOR PICTURE QUALITY
H0404179	7	56PW5UE	24669101	CAPACITOR, 100MFD, 50V	49251436	B05	POOR PICTURE QUALITY
H0404056	7	48PJ5UE	23148323	MODULE, MVCS45D	82251418	B05	POOR PICTURE QUALITY
H0403670	6	38D9UXE	23708232	PC BOARD ASSY, RGB D, PE	20733224	B05	POOR PICTURE QUALITY
H0403113	6	43A7DE	23000928	IC, SLA4501M	15660249	B05	POOR PICTURE QUALITY
H0404005	6	50A9UE	23148794	MODULE, TEXT, M-TEXT-P2S	42661285	B03	NO PICTURE
H0404424	6	43V9UE	23144450	PROTECTOR, PRF2000, 125V	96662814	B03	NO PICTURE
H0404424	6	43V9UE	23316254	DIODE, ERC06-15	96662814	B03	NO PICTURE
H0404405	6	44G9UXE			68240259	B00	DARK PICTURE
H0404794	6	44G9UXE	23782408	PC BOARD, CONTROL	86240279	B00	DARK PICTURE
H0403743	5	43A9UE	23148794	MODULE, TEXT, M-TEXT-P2S	70662129	B03	NO PICTURE
H0404125	5	43D9UXE	23905094	IC, STK392-110	20660153	B03	NO PICTURE
H0403298	5	43A9UE	23135028	IC, STR-Z4479, HYBRID	97660391	A09	DEAD
H0404468	5	43G9UXE	23905094	IC, STK392-110	74660320	B03	NO PICTURE
H0403162	5	38D9UXE	23405117	PBS BLOCK	22661576	A44	LAMP REPLACEMENT(WIRE
H0403162	5	38D9UXE	23588622	LAMP UNIT	22661576	A44	LAMP REPLACEMENT(WIRE
H0404900	5	55PJ5UE	23319787	IC, LA7833S	62250680	B03	NO PICTURE
H0403804	5	38D9UXE	23588622	LAMP UNIT	17742231	A40	LAMP REPLACEMENT GENE
H0403930	4	55PJ5UE	23904247	IC, STR-S6708	70251323	A09	DEAD
H0403930	4	55PJ5UE	24669470	CAPACITOR, 47MFD, 50V	70251323	A09	DEAD
H0404324	4	43A9UE	23135004	IC, STR83145A(LF501)	63661909	A09	DEAD
H0404324	4	43A9UE	23135028	IC, STR-Z4479, HYBRID	63661909	A09	DEAD
H0404324	4	43A9UE	23144479	PROTECTOR, AC125V 4.0A, F	63661909	A09	DEAD
H0404324	4	43A9UE	23316325	DIODE, UZ9.1BSC	63661909	A09	DEAD
H0404622	4	38D9UXE	23301378	LCD DISPLAY, TFD27W10K	20733074	A40	LAMP REPLACEMENT GENE
H0404622	4	38D9UXE	23588622	LAMP UNIT	20733074	A40	LAMP REPLACEMENT GENE
H0403557	4	35WP26P	23906642	IC, AT24C64-10PC	28000749	B47	REMOTE CONTROL MALFUN
H0404889	4	48PJ7UE	23123922	ANTENNA DIVIDER, 2D1CH, I	92660132	B03	NO PICTURE



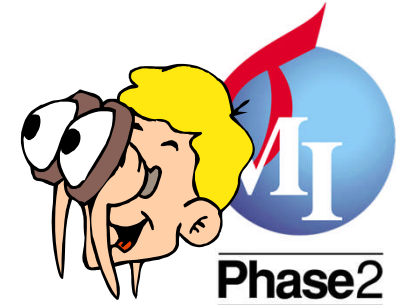
Part No	TART						Total
	4	5	6	7	8	9	
23000725	MODEL	43V9UE				1	1
	Total					1	1
23000928	MODEL	43A7DE			1		1
	Total			1			1
23009142	MODEL	43V9UE				1	1
	Total					1	1
23118188	MODEL	43N9UXE					1
	Total						1
23123922	MODEL	48PJ7UE	1				1
	Total		1				1
23135004	MODEL	43A9UE	1				1
	Total		1				1
23135028	MODEL	43A9UE	1	1			2
	Total		1	1			2
23144450	MODEL	43V9UE			1		1
	Total			1			1
23144479	MODEL	43A9UE	1				1
	Total		1				1
23144867	MODEL	43N9UXE					1
	Total						1
23148323	MODEL	48PJ5UE				1	1
	Total					1	1
23148757	MODEL	50D9UXE					1
	Total						1
23148794	MODEL	43A9UE		1	0		1
	50A9UE			0	1		1
	Total			1	1		2
23301378	MODEL	38D9UXE	1				1
	Total		1				1
23316254	MODEL	43V9UE			1		1
	Total			1			1
23316325	MODEL	43A9UE	1				1
	Total		1				1
23319787	MODEL	55PJ5UE		1			1
	Total			1			1
23405117	MODEL	38D9UXE		1			1
	Total			1			1
23588622	MODEL	38D9UXE	1	2			3
	Total		1	2			3
23708232	MODEL	38D9UXE			1		1
	Total				1		1
23782408	MODEL	44G9UXE			1		1
	Total				1		1
23904247	MODEL	55PJ5UE	1				1
	Total		1				1

Count

Part No	TART						Total
	4	5	6	7	8	9	
23905084	MODEL	43N9UXE					1
	Total						1
23905094	MODEL	43D9UXE		1			1
	43G9UXE			1		0	1
	50D9UXE			0		1	1
	Total			2		1	3
23906642	MODEL	35WP26P	1				1
	Total		1				1
24073038	MODEL	56PW5UE				1	1
	Total					1	1
24092341	MODEL	43N9UXE					1
	Total						1
24669101	MODEL	56PW5UE				1	1
	Total					1	1
24669470	MODEL	55PJ5UE	1				1
	Total		1				1



2 Weeks Data Collection Analysis



Using Minitab, & applying One –way ANOVA: TART versus OT, PT, TRVL & WORK

	OT	PT	TRVL	WRK
P	0.659	0.789	0.031	**

P-Value < 0.05 FOR TRAVEL & WORK (?)



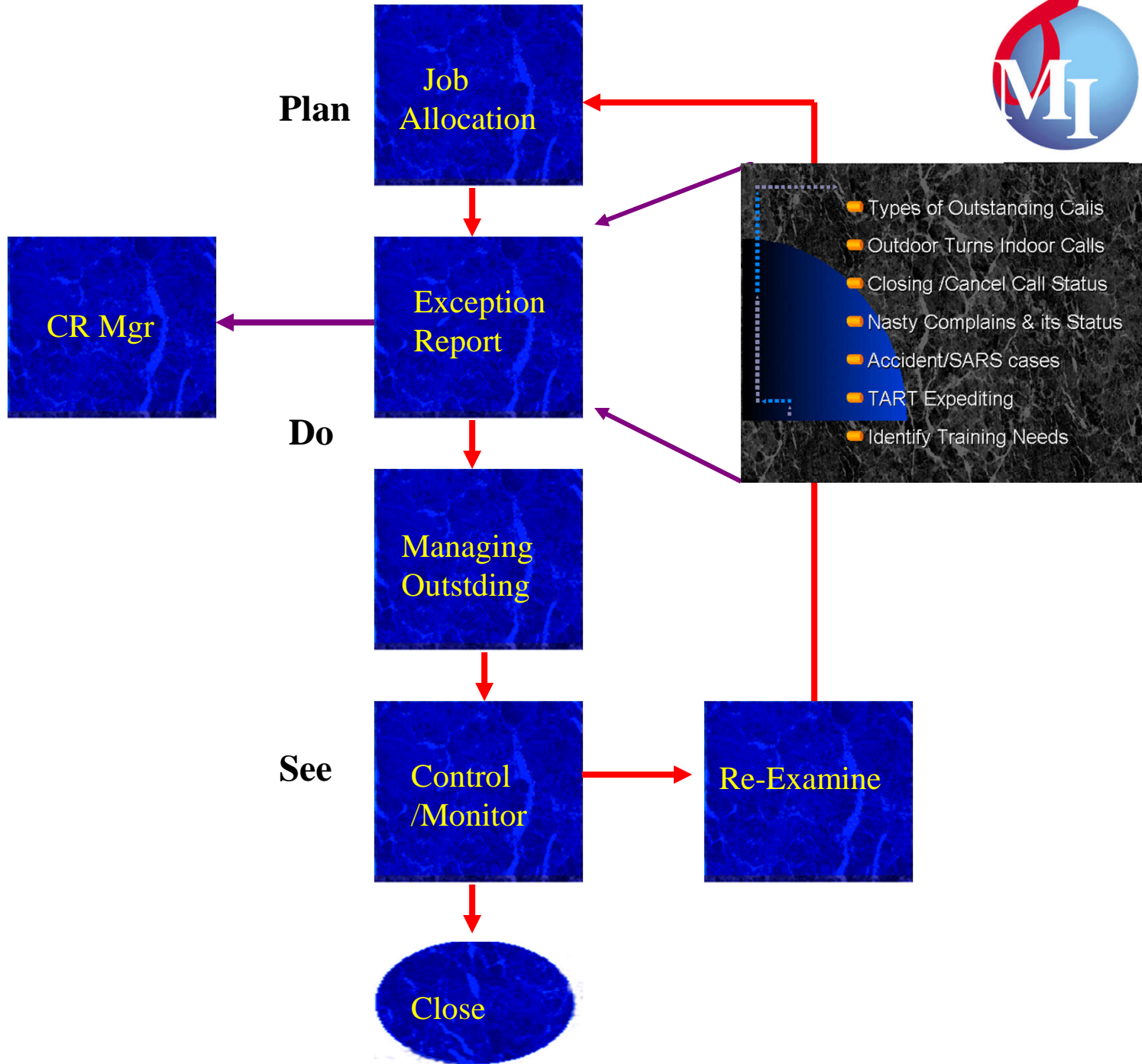
REJECT Ho, there IS difference in mean

OTHERS P-VALUE > 0.05

(After Hypothesis Testing)

Meaning: All variables cannot(except Travel & Work (?) affect the out coming of TART

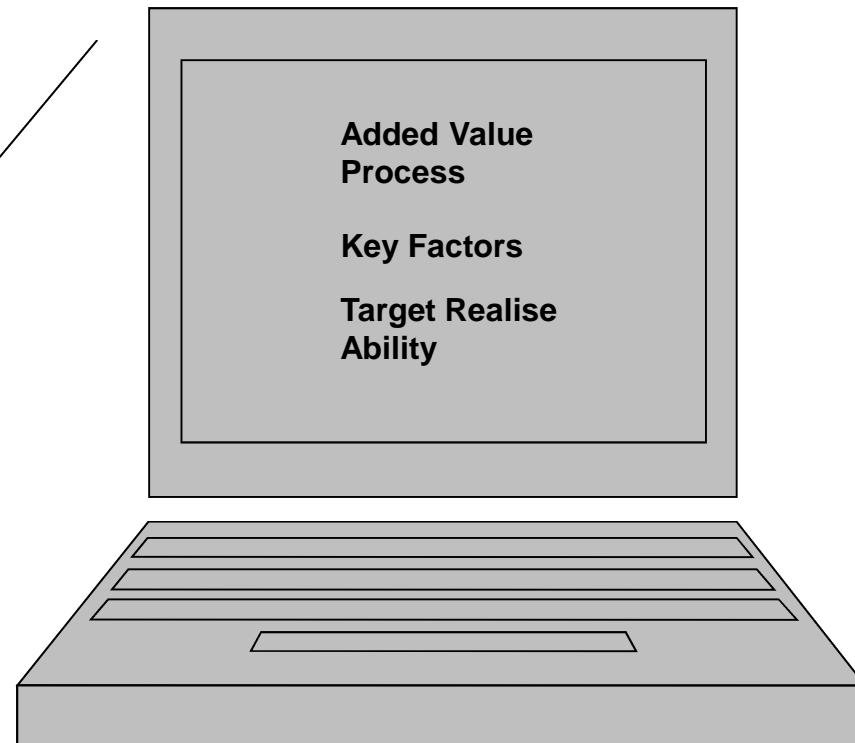
Flowcharting Supervisor's Accountability





Recommended Improvement

Phase2





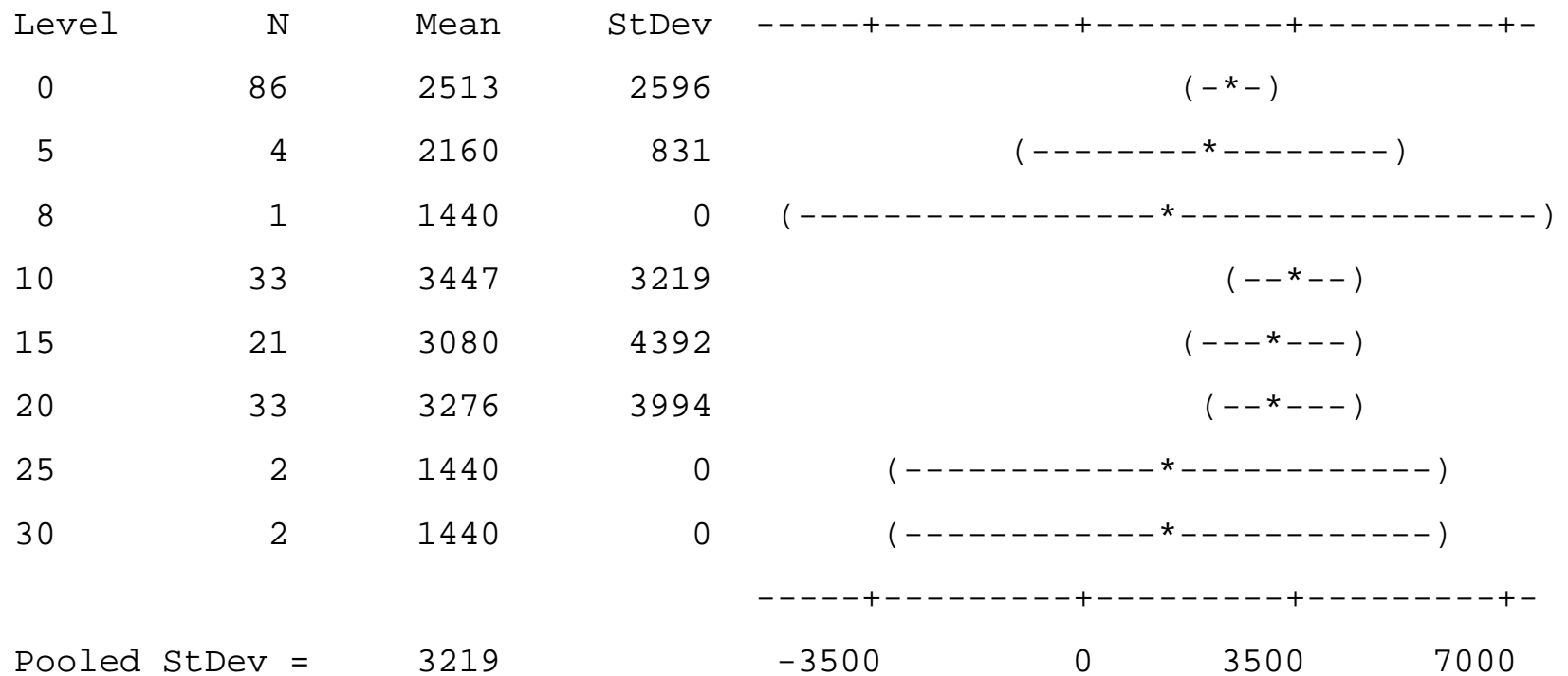
1. Focused only on added value process that retarded the throughput time.
2. This involved the identified process/factors that are critical to obtain result effectively.
3. From analysis, both statistical tested & Supervisor's Job Responsibility, travel & the work time are key factors.
4. In line with target set: 90%, with a day, this cannot be practically realised without workshop supervision improvement; both by improving administrative control & more informed information in time to expedite repair before job is done.
5. In addition, work time processes should altered



Analysis of Variance for Tart (M

Source	DF	SS	MS	F	P
Part	7	40499630	5785661	0.56	0.789
Error	174	1.803E+09	10359605		
Total	181	1.843E+09			

Individual 95% CIs For Mean
Based on Pooled StDev





Analysis of Variance for Tart (M

Source	DF	SS	MS	F	P
Travel	8	168714228	21089278	2.18	0.031
Error	173	1.674E+09	9678362		
Total	181	1.843E+09			

Individual 95% CIs For Mean

Based on Pooled StDev

Level	N	Mean	StDev	
5	2	10800	13237	(-----*-----)
10	18	1922	1846	(--*--)
15	18	2723	2786	(-*--)
20	91	2785	2802	(-*)
25	7	3086	2931	(---*----)
30	31	3484	4219	(-*--)
35	7	1851	703	(----*----)
40	3	2880	2494	(-----*-----)
45	5	1728	644	(----*-----)

-----+-----+-----+-----+-----

Pooled StDev =	3111	0	5000	10000	15000
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One-way Analysis of Variance

Analysis of Variance for Tart (M

Source	DF	SS	MS	F	P
Work	52	1.843E+09	35443672	*	*
Error	129	0	0		
Total	181	1.843E+09			

Individual 95%

CIs For Mean

Based on Pooled

StDev

Level	N	Mean	StDev	
14	1	49.0	0.0	*



Optimizing

- ✓ A look at the process mapping confirmed that all processes are essential and should not be pruned.
- ✓ Amongst them, RW (Repair) & PW(Part) are critical to the end result.
- ✓ New job flow should be incorporated



Recommended Strategies

1. Full involvement of supervisors & manager.
2. Increase enthusiasm by more meetings with service staff.
3. Preparation of progressive information to expediate TART
4. Using Crystal Report to control the return of non-used part, easing availability
5. All Contractors to work on Sat. to provide more service opportunities.
6. Minor call cancellation throu' improved phone techniques
7. Improvement of workshop supervision

Close



Checklist

	By Whom	Term	Checklist
1	CR Mgr	3 mths	Keep Record
2	CR Mgr	3 mths	Keep Record
3	CR Mgr	3 mths	Keep Record
4	CR Mgr	3 mths	Keep Record
5	Call Ctr	3 mths	Keep Record
6	CR Supr/Call Ctr	3 mths	Keep Record
7	CR Supr	3 mths	Keep Record

Close



Test & Results

Observation
Period

	TTLCPD	TART > 1 DAY	TART 1 DAY & <
APR-03	225	69	69.33%
MAY-03	257	65	74.71%
JUN-03	159	30	81.13%

Pilot
Test

Close



Result

	DPO	PPM	Z SHIFT	Z BENCH
TARGET	0.1	100,000	1.5	2.782
ACTUAL (JUN 2003)	0.1869	186,900	1.5	2.389
CURRENT (MAR 2003)	0.4024	402,400	1.5	1.747

As of start of Project



Limitation

- Short duration of Pilot test
- To sustain concrete result, continuous improvement is necessary
- Any deviation should be further rectified by a long term plan with concrete structural change if deemed necessary



Close