

# ROI Analysis - QIT Corrective Action Management System

## 1) Corrective Action Process

Corrective Action Process	Process Time (minute)				Remark
	W/O a system	Manual System	In-hours system	QIT System	
QA initiates CAR	0	20	5	5	
QA sends CAR	0	10	1	1	
Responsible Person receives CAR	0	5	1	1	
Responsible person analyzes CAR	0	10	10	10	
Responsible person conducts root cause analysis	0	60	30	15	QIT system has a built-in root cause analysis tools, which will help users conduct in-depth root cause analysis
Responsible Person sends CAR back to initiator	0	10	1	1	
Initiator reviews CAR	0	20	5	5	
Initiator closes CAR	0	10	1	1	
<b>Total Minutes for a CAR</b>	<b>0</b>	<b>145</b>	<b>54</b>	<b>39</b>	

## 2) Productivity Comparison

Annual Cost for 300 CARs	Total Administrative Time (minute)				Remark
	W/O a system	Manual System	In-hours system	QIT System	
Annual process time for complaints (100 complaints/year)	0	0	0	0	
Annual process time for nonconformance (500 nonconformance/year)	0	0	0	0	
Annual process time for CAR (300 CARs)	0	43500	16200	11700	
QA Summarize CAR Cost, Failure Mode, and other reports	0	11520	12	12	
<b>Total Annual Administrative Time (minute)</b>	<b>0</b>	<b>55020</b>	<b>16212</b>	<b>11712</b>	
<b>Total Annual Administrative Time (hour)</b>	<b>0</b>	<b>917</b>	<b>270</b>	<b>195</b>	79% productivity improvement after moving from the manual system to QIT system

## 3) Total Cost Comparison

Cost Driver	Cost				Remark
	W/O a system	Manual System	In-hours system	QIT System	
Administrative Cost (\$36/man hour)	\$ -	\$ 33,012.00	\$ 9,727.20	\$ 7,027.20	
First Year Software Cost	\$ -	\$ -	\$ 26,666.67	\$ 20,000.00	Develop an in-house system will take two experienced engineers (80K/year) at least 2 months to develop and test the system.
Penalty cost for 100 complaints and 500 nonconformance	> 1 M?	\$ -	\$ -	\$ -	
<b>Total Cost</b>	<b>&gt; 1 M?</b>	<b>\$ 33,012.00</b>	<b>\$ 36,393.87</b>	<b>\$ 27,027.20</b>	19% cost saving comparing to Manual System 26% cost saving comparing to In-house system

## 4) Conclusion

- 1) A Complaints-nonconformance system is needed for any business who is concerning about customer, cost and productivity.
- 2) Using QIT System will improve your productivity by 79%.
- 3) Comparing to a manual system, using QIT System will save operating cost by 18% in the first year and 64% thereafter.
- 4) Using QIT System will help you improve customer loyalty and customer retention by reducing the response time on complaints.
- 5) Using QIT System will help you identify cost reduction opportunities. Most of our customers identified > \$1M improvement opportunities per year.