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Implement Innovative Proactive-Service-Center to Enhance Service Performance in Customer Site

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Abstract

How to more efficiently and effectively enhance service performance is an on-going challenge to any service team. A new service model, Proactive-Service-Center (P-S-C), is developed since Feb'01. As a result, the service performance results are improved in terms of same day issue closure rate, issue response time and system uptime. The P-S-C is not only an innovative way to enhance service performance but also a systematic way to build-up engineers' trouble-shooting capability.

In the old service situation, the information flows randomly among customer engineers, customer section managers, AMT engineers, and AMT site managers. The average time spent is around two hours from Issue Happened to Dedicated Engineer on site. Customer and AMT engineers are running around like a chicken without head. The information flows inefficiently and ineffectively among customer engineers, section managers, AMT engineers and site managers. The detailed solutions are not documented and remained in the engineers' heads.

In the PSC model, the information flows automatically from the system which is down to the customer Server then to the PSC Server and the dedicated AMT engineer is automatically informed. The information flows efficiently and effectively. The actions done are then systematically entered and documented in PSC and a monthly analysis report is generated and provided to customers.

The cost savings of PSC can be estimated indirectly. The issue response time is reduced from 2 hours to 58 minutes (reduced by 62 minutes). This translates to the increase of system uptime by 62 minutes. This will bring cost savings. In addition, the issue closure rate is improved from 50% to 85% (improved by 35%). This also translates to the increase of system uptime. The system uptime enhancement is cost savings.

Three areas which need improvement are identified to be Technology, People and Process. Technology: Internet is used and many auto functions (for example, reminding, reporting) are built-in to enhance the capability. People: Dedicated Engineer Matrix is built-in PSC and the right engineer can be reached at the right time in the most efficient manner. Process: Process is real time and systematic with clear R&R defined to ensure efficiency and experience build-up in the future.

Data : Original work performed

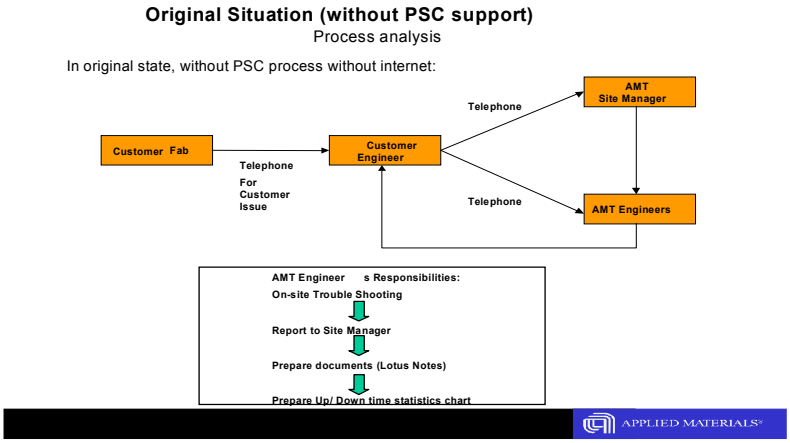


Figure 1: Original Situation (without P-S-C support)

1. Solutions

As indicated in Fig. 1, the original service situation is not real time, no service record, and no standard format to collect field trouble-shooting experience. The customer decides when to make the phone call of any issue and there is no service record of the time involved trouble-shooting for any issue. In addition, after the issue is solved, the experience remains inside the engineer's head.

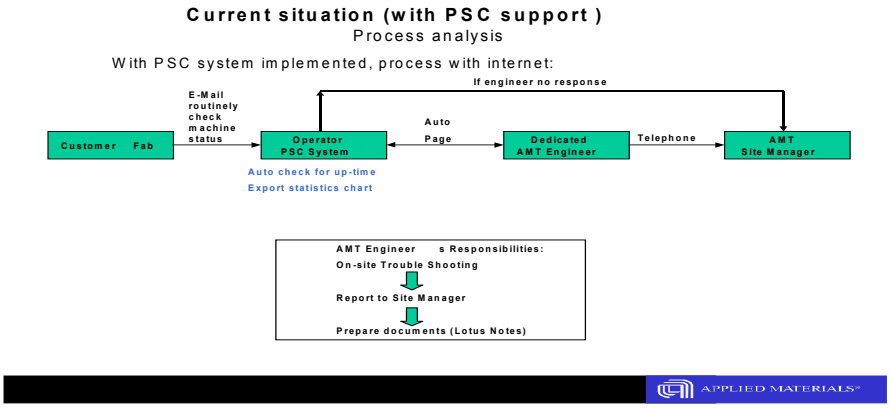


Figure 2: Current situation (with P-S-C support)

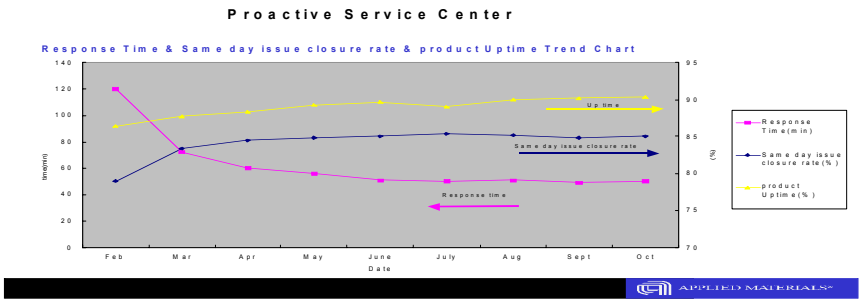
Table 1: Benefit Analysis of Original Service Situation v.s. Proactive Service Center (P-S-C)

Category	*Original Service Situation*	*Proactive Service Center*	*Benefit*
Mechanism	Reactive	Proactive	The support mechanism is now proactive instead of reactive to wait for issue to happen. Research can be done for each issue before discussing with customers. **This has shorten the issue cycle time.**
Issue	Delayed	Real Time	**Issue cycle time is shortened** since there is no time delay in waiting for each issue to be reported.
Satisfaction Index (Same Day Issue Closure Rate)	N/A	Available	Same day issue closure rate is recorded in the P-S-C database and can be calculated regularly. This meaningful index can be monitored to **enhance customer satisfaction.**
Satisfaction Index (Issue Response Time)	N/A	Available	Issue response time is calculated automatically in the P-S-C database and this meaningful index can be monitored to **enhance customer satisfaction.**
System Uptime	Maintain	Maximize	Since the issue cycle time is shortened, the **system uptime performance is maxmized.**
Trouble-Shooting Guide	N/A	Systematically Build-Up	Trouble-shooting guide is built up systematically from engineers' service report which **enhances engineering capability and improve system uptime.**

As indicated in Fig. 2, the current service model is real-time with service record in the PSC system. In addition, the software is written to include auto checking and alarming functions for low uptime systems and it systematically collects field trouble-shooting actions done by engineers.

In short, when there is a variation in system normal condition, then the system automatically sends out the abnormal message to the customer server. The AMT server receives the message and page the system's dedicated engineer automatically. The engineer responsible for the system response to the operator at the P-S-C, acknowledge receiving the pager and with on-site arriving time. After the issue is resolved, the engineer will fill out the service report with actions done.

The new service model, P-S-C, is real-time in issue feedback with service record and the engineer's trouble-shooting experience is systematically documented for future reference. The PSC solution is proven sustainable over time as indicated in the results trend chart. Fig. 3: Results Trend Chart.



2. Product Excellence

The benefit of P-S-C is summarized in Table 1. The P-S-C mechanism is proactive and shorten the issue cycle time. The issue is real time acknowledged to shorten cycle time. The customer satisfaction index previously not available such as same day issue closure rate and issue response time are now available to enhance customer satisfaction. In addition, the system uptime is now maximized since the issue cycle time is shortened. The P-S-C process is systematically collecting engineers' service report which serves as the base to build up the field trouble-shooting guide. The field trouble-shooting guide can be used to enhance engineering capability and improve system uptime.

In addition, the PSC has accumulated historical data on each system. Data analysis are done and included in the Monthly Report. The data analysis includes top 3 root causes for downtime and actions done which can be used to forecast future manpower arrangement and materials allocation. This means the data analysis from PSC can be used proactively for future manpower or materials planning.

3. Model of Proactive Service Center

The model of P-S-C is shown in Fig.4 and management theory framework of P-S-C is documented in Fig. 5 and it includes the Infrastructure, Methods and Theories and Application of P-S-C. In addition to Internet, the infrastructure is based on Knowledge Management. P-S-C is a systematic way to document engineering field knowledge. During P-S-C implementation, it is crucial the customers fully understand the security and technology of P-S-C. The application of P-S-C can be shown in Fig. 4 to be Cycle Time Enhancement, One-to-One System Historical Record, Engineering Trouble-Shooting Build-Up, Proactive Service Provider and finally customer satisfaction leverage to create Win-Win-Win situation among AMT, customers and customers' customers.

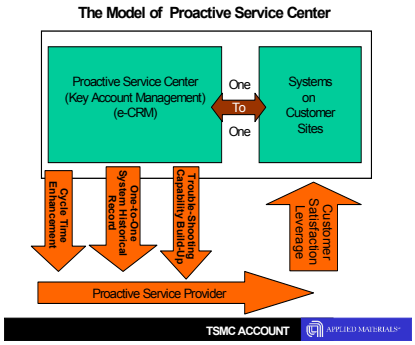
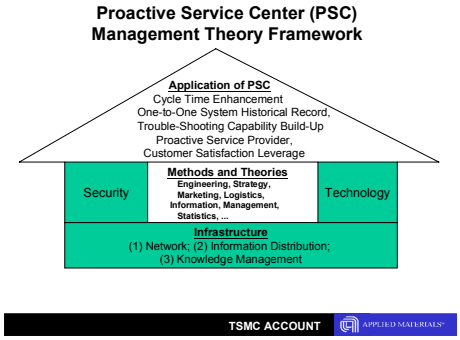


Fig. 4: The Application Model of Proactive Service Center



Firg.5: Management Theory Framework

Reference

Software structure: We include the following software structure for IT reference.