Service Information Systems

Case Study

Implementation for a UK Medical Device Manufacturer

The Problem

The Customer manufactures and services medical equipment used to clean invasive instruments throughout the NHS and Private Healthcare establishments in the UK. Conducting end user training, routine maintenance, regular testing and responding to fault calls for some 2000 pieces of equipment across the UK and Northern Ireland creates a significant level of activity and a management challenge.

Hard copy Visit Reports detailing the actions taken during a visit to a particular piece of equipment would be filed but retrieval at a later date often proved problematic due to human error. Keeping up with progress of 100's of jobs on a regular basis was a constant challenge and involved a great number of phone calls to Field Engineers and Customers in order to maintain some degree of control.

Re-arranging visits due to Field Engineer availability, traffic issues, illness etc. and due to Customers cancelling or wishing to rearrange visits was a constant negative impact on the service.

Management and representatives had a very poor view of what was happening 'on the ground' and in many cases were far too divorced from actual versus perceived quality of service, which severely impacted their ability to discuss performance effectively with the Customer and often created significant tensions.

Management of Maintenance Contracts, renewals, pricing and performance against contractual obligations were extremely complex and very difficult to keep under control using manual systems.

The steps required previously were as follows;

- Taking Customer calls to report problems, writing out the details such as Customer, Caller, Return Phone Number, Nature of the problem, which piece of equipment it relates to, when it would be convenient to visit.

- Check which Field Engineer might be available to make the visit.

- Call the Field Engineer to describe the problem and get them to commit to attend.

- Call the Customer to confirm that the call will be attended at such and such time.

- Call the Field Engineer to confirm that they are on their way.

- Call the Customer to confirm that the visit is imminent.

- Field Engineer calls in to report the outcome.

- Field Engineer fills out a Visit Report and gets it signed by the customer.

- Call the Customer to report the outcome and check that they are happy with it.

- Field Engineer posts the written Visit Report to the office.

- Visit Reports arrive in the office anything from two days to three or four weeks after the event.

- Back Office staff record details of the call and the outcome in a spreadsheet and file the written Visit Report.

The Approach

A review of the processes, procedures and systems was carried out over a period of two weeks during which time we identified the requirements for automating the process. Our approach recognised that the activity was in fact highly generic, specifically who did what, where, when and why, and that by taking care not to lock the solution into the specific service activities of the Customer we would end up with a system which would suit many different field operations activities regardless of industry.

We determined that the solution should be a central repository for all related information and that the system should be accessible from any location. We then identified the two key components of the service; the Customer and the Equipment, as it is these two 'handles' from which all other information related.

We then defined the required functionality, gathering information from the existing Service Management staff and Field Engineers, in order to identify the look and feel for the final solution.

The Solution

The solution included the recording of all customers and locations (departments) where equipment was installed together with details of each piece of installed

equipment. In addition, each piece of equipment was covered by a maintenance contract and the details of this were also recorded.

Basic generic information relating to Customer and Equipment (Asset) was specified, e.g. Customer Name, Address, Telephone Number and Asset Make, Model, Serial Number and then we added 'dynamic' data which provided the flexibility to define different data against different categories of Asset (Asset Type). It is the latter which facilitates to option to use the system for any particular industry.

Numerous, unlimited, Maintenance Contract types are defined in the system and associated with every installed Asset. Maintenance Contracts include a set of actions which are contractually required, such as quarterly or bi-annual Planned Preventative Maintenance (PPM's) visits, quarterly or bi-annual quality tests or weekly water testing etc. When a contract is recorded against a Customer, or Customers, the system generates all related contractually obligated calls at the pre-defined date points for the contract duration. This provides a powerful advanced planning opportunity for known requirements for spare parts and human resources.

The system also produces Maintenance Contract renewal quotations, based upon the previous years contract but which can be modified as required.

All actions (Calls) go through stages (States) which are recorded, such as New, Assigned, Acknowledged, Visited, Closed etc. States can be tailored to each system implementation and information about each State can also be tailored, e.g. when a Call is Assigned we might want to know who it is assigned to, who assigned it, when it was assigned and then, having Assigned it, we want to know when it was Acknowledged.

All Calls are assigned to mobile staff who receive and process the Calls on their iPads. The iPad synchronises with the main database when the engineer presses the Sync button. Synchronisation can be set to occur at regular intervals, but this is optional and has an impact upon battery life.

Each call received on the iPad contains details of the previous six calls to that Asset in order for the user to review recent activity. The user records actions taken during the visit and records any spare parts used. Parts and Root Causes available to the user are restricted to parts and root causes specific to the Asset Type being processed. The latter is accomplished by defining a matrix of Parts vs Asset Type and Root Cause vs Asset Type and both clearly require definition and maintenance within the system.

The result is a system which gathers all actions, with dates and times, from which

virtually real-time reports can be produced. Reporting is done using a third party reporting application which also has the ability of running automated reports and delivering them via email, saving them to network folders or providing access via the internet.

The Outcome

The immediate and most obvious benefit of the system is that the Status of all Calls is now visible. Back Office staff (Customer Services) are able to see that an assigned call has been Acknowledged, or to step in if a call remains un-Acknowledged for a period of time, when it has been visited and when it has been closed, all without the need for telephone calls to check on progress.

The second major benefit is the ability for managers to receive up to the minute reporting and to use the available data to effectively discuss performance with Customers.

The third major benefit is in seeing which parts or processes are causing the most problems and therefore having the ability of investigating and mitigating the underlying issues.

The ability to produce Maintenance Renewal Quotations delivers a significant saving on resources involved in managing Contract Renewals.

More generally the system provides visibility of all activities together with comprehensive reporting which benefits managers at all levels. Advanced knowledge of PPM activities enables effective and accurate planning for service kit requirements and engineer exposure.

What the Customer Says

The Operations Director

" The company has employed the service management system, SIS, for approximately 15 years. The system was developed and sold by Service Information Systems, the development company, and the ongoing support has been provided by Mobile Information Systems who deliver the service and support the system.

This system has evolved over this period to meet the needs of our company. Initially the business model was predominately a rental of capital equipment and a database was needed to track the assets in the field and the rental contract status.

As time passed it became obvious that the system was capable of far more and was developed to not only track the asset but also to store service history. As the business model moved to capital sales and service, a host of various contracts developed and these were also built into the SIS system.

Today the SIS management system handles all machine movements, installations and commissioning, service contracts and validation contracts. The system handles contract renewals and service reporting to meet our customer's needs. Most importantly it schedules the planned visits required and automatically schedules these according to each individual asset's requirements.

Our Service business has an annual turnover of circ £10M p.a. in the UK and this has only been made possible with the utilisation of SIS. Contract renewals and effective communication and reporting with our customers mean we hold over 90% of our installed base on a maintenance contract at various levels of cover.

From a management perspective SIS delivers reports and Service information which drives our business and helps in strategic business decision making and reporting profitability.

SIS has been supported by Mobile Information Systems for it's entire tenure and the support and collaboration has been first class. The partnership between our two companies has been formidable and we have worked as one company. "

The Customer Services Manager

" Having used SIS over a number of years I have found the application to be very user friendly and comprehensive. It can be adapted for any use and the backup support is first class.

Whether it's used as a database for storing information or interacting with other applications then I would not hesitate to recommend the product.

SIS can be made to support any type of business and having used it in a fast reactive environment it certainly proved its worth. "

The Senior Service Engineer

" SIS was a revelation to the field based team of engineers.

All the information you needed at the touch of a screen, where and when you are going, contact names and numbers all there for you ending the numerous phone calls and emails it normally took to get your jobs organised.

Drop down lists for parts used that could then be automatically replenished removing any chance that you were not carrying the correct stock.

Altogether a brilliant tool for field engineers. "

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