

CASE STUDY

OPERATING ROOM TRACEABILITY AND SAFETY AN INTEGRATED SYSTEM FOR THE MANAGEMENT OF SURGICAL DEVICES AND PROCEDURE KITS

Release 1.0

CLIENT
SERVIZI ITALIA
MEDICAL

SECTOR
HEALTHCARE

APPLICATION
SYSTEMS FOR THE
MANAGEMENT OF
PROCEDURE KITS
USING
BARCODE AND RFID
TECHNOLOGY

TECHNOLOGY
UNEQUIVOCAL
IDENTIFICATION,
MIDDLEWARE

COMPANY

Servizi Italia Medical (SIM) is a company based in Spino d'Adda (CR) specialized in medical devices, sterilization materials and procedure kits, working under several multinational realities. Italian leader in the purchase of medical devices for sterilization and operating rooms, it has a staff of top-notch professionals, brought together by the desire to create projects and improvement paths in the administration, management and operation of health care.

NEEDS

To improve the efficiency and effectiveness of the service offered, the company decided to engineer a series of processes, creating a specific application for marketing management of all aspects of the various procedure kits: search for components, kit composition, requesting supplier offers, final customer approval, issuing purchase orders to suppliers. The solution also needed to support hospital activities, providing department managers with all the information they need to quantify, both in economic and logistics terms, consumption by procedure, ensuring traceability

and reverse traceability of each device associated with a precise localization in order to provide better support for the management control process.

SOLUTION

Technological development revolved around the creation of a Web-based application with two functional sections: the administrative function and the consultation and service function. The first provides support for the SIM staff so that all the information required for kit management can be entered: general tables, customer and supplier database, component database (general and supplier), device database, customer book, reorder management. Upon receipt of customer indications, the operator enters the code for the kit, selecting the components that will make up the procedure kit. In the following phase, the customer approves the configuration and, in some cases, this can even include modifying kit composition. Upon receiving the order confirmation, a price quote request is sent to the supplier and then the purchase order is issued. The kit code can be created by selecting the components manually from the database or using the related barcodes. This function makes product selection faster and safer and can be performed using a normal barcode reader in keyboard emulation.

An application was also created for small portable terminals that reads the barcodes and TAGs for the devices and procedure kits, records drawdowns and updates the main application over a GPRS connection. As regards hospital devices, each has its own unequivocal barcode and the application on the small terminal uses this to drawdown the material used during procedures. In the consultation section, the hospital users can view the consumption of each surgical procedure, thus monitoring both economic and logistics aspects of the operation. The drawdowns are performed by reading the barcodes, or tags in the case of procedure kits, present in the customer book. Once the data are gathered, they are sent to the central system over a GPRS connection.

BENEFITS

- Complete management of the procedure kits (coding, marketing, logistics) and data logging of status and costs
- Web browser access to all application functions
- Additional services for the hospital: consumption management by procedure achieved with portable terminals, barcodes and tags
- On-line reporting of costs and consumption per procedure
- Precise, secure traceability and reverse traceability

