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Use of Radio Frequency Identification Technology (RFID) for material management offers up to eighty percent time savings.

Electronic service and maintenance company, Dynamics Circuit specializes in the repair of test equipment, printed circuit boards and other electrical and electronic equipment. Due to nature of the business, it receives repair items of different types and models. So tracking them can become overwhelming as the business grows and inventory builds.

When the company takes an inquiry, the staff will first assess whether the fix is possible, determine the cost and time required for the repair and communicate this to the customer. While awaiting the consent from the customer to start the job, the item will be sitting in storage in the workshop.

The company's managing director Kunasegar said in an interview, "sometimes customers will reply soon, but sometimes they need time for their management to give permission and some did not even reply. As a result, many items are pending and inventory then accumulates and builds up. Tracking these items then becomes a problem."

In the past, the company tracked the items manually. The number of items received are first marked and recorded in a book. This was extremely time consuming and prone to mistakes. Items sometimes go missing and can take between two to three hours to find.

To improve efficiency, the company adopted Radio Frequency Identification (RFID) technology to track the items. In the new process workflow, staff will track the item location as it was stored. If not found, a scanner will be used to locate the misplaced item, saving up to 7 to 8 times the normal time required to locate a missing item manually.

Kunasegar said: "You just hold Scanner around, if you are close to the object, it will emit an intermittent 'beep' sound. The closer you are to the missing item, the louder the "beep" will become. He said that the scanner can cover a two meter range; enough to cover the workshop area. If you need a stronger detection capability, the scanner detection setting can be increased to reach up to four meters.

The company spent a total of \$10,000 adopting this technology and used SPRING Singapore's Productivity and Innovation Credit, PIC, to offset costs.

Dynamics Circuit adopted the physical file management and tracking system scheme from the Manufacturing Productivity Technology Centre.

The centre director, Dr. Li Ronghua said the system was initially tailored for use across larger SMEs or state enterprises. The centre decided to extend the scheme to smaller SMEs, after they found that the operations in these smaller SMEs were predominantly manual. He said, "They spend too much time repeating the same manual procedures, resulting in low efficiency and mistakes. Under the planned extension of the scheme, there will be a basic management system to enable companies to more effectively manage their assets and to help mitigate daily workload."

He also said that the system can help industry enterprises reduce efficiency loss by 50% to 80%. Required storage space between orders and shipment can also be reduced by 30% to 60%.

According to information provided by the Manufacturing Productivity Technology Centre, it takes on average two months to implement at an average cost of \$10,000. There are currently 65 SMEs who have started to use the system.