2012

CASE STUDY ON QR CODE (2D) BASED ASSET INFORMATION MANAGEMENT SOLUTION (R- AIMS)

Uma Ganesh

AB Logics Private Ltd

11/15/2012

Executive Summary:

Asset management is one of the many ways to increase and improve functional efficiency of any manufacturing industry.

Barcode and QR code technology helps in managing the assets with Reusable asset management and stop loss challenge.

This will help to control the purchase of parts materials, goods and services and manages the supply chain cycle efficiently.

Problem Statement:

Over the past several years the manufacturer of fabrication materials has inadvertently misplaced significant number of assets without a proper tracking procedure or barcode system, in place to monitor each unit, there was no effective means of maintaining their inventory.

To address this issue, the fabrication manufacturer, Veer-o-Metals, who is the leader in fabrication industry decided to implement 2D based QR code system and engaged AB Logics for the same. Veer-O-Metals have 7 units spread across India and Philippines covering approximately 20000 assets.

Barcode

Barcodes can be seen on almost every product we purchase. For decades barcodes were the only universally available technology that allowed tagging and tracking of assets. After almost 40 years from the initial implementation, barcodes are still one of the most affordable methods of storing data for quick product identification. Unfortunately, barcodes have many limitations. They can only store up to 20 numeric characters, they have to be scanned at a right angle, and when damaged they are practically unreadable.

QR Code

You have surely seen them used in marketing campaigns, but QR codes were originally designed to track assets during manufacturing process. A QR code is ultimately a two dimensional barcode that stores data both horizontally and vertically. When compared with barcodes, QR codes can hold much more information. In fact, a complex QR code can store over a page of plain text. Since QR codes are much smaller than barcodes, they are also easier to scan using smart phones. Additionally, unlike barcodes they can be scanned at any angle making <u>mobile data collection</u> much faster than before.

Essentially, QR codes combine functionality with powerful data storage. They can be used to track both high value and low value assets, and they are just as effective for office equipment as for heavy duty machinery.

Tech Bee - R - AIMS (Asset Information Management System)

R - AIMS is an Enterprise Asset Management solution from ABL designed to derive values from capital investments.

With **R - AIMS**, Asset lifecycle value is maximized through effective optimization of all the associated processes. ROI has been derived from risk management, saving of time and resources by automatic data capturing methods and audit. Right information at right time to right people makes all the stakeholders aligned with the real-time data, which is key for effective asset management. **R - AIMS** covers the asset lifecycle from Physical, Informational and Financial dimensions in an organized way where every action performed on an asset is not excluded and thus makes information security and audit very much possible within the purview of asset management.

The open architecture on which **R - AIMS** is built makes it possible to interact with related external application for exchange of data. This makes **R - AIMS** powerful system because in principle, it fills the gap between the Materials and Finance system.

The advantage of using **R - AIMS** for asset management is multifold. With **R – AIMS,** real-time data shared between authorized users. **R - AIMS** handles risk management by reminding the users for important actions to be performed like service schedules, renewing contracts, and insurance related information well in advance which are a key factor in maximizing the performance of the assets.

An asset calls for different stakeholders at different phases of asset lifecycle. Ex. Purchase team involves in procuring, maintenance team comes next in operating and maintaining, Commercial team for taking care of contracts and finance and audit team for the valuation. **R - AIMS** ensures real-time updated information flows seamlessly to all these stakeholders to keep them aligned. **R - AIMS** captures major parameters of Asset register like Location, Departments, Cost centers and grouping and makes it possible to analyze the data with any / all of these combinations.

Solution Methodology:
The solution is offered on QR code (2D) technology. All the assets will be allocated a unique identification number by generating QR code and label will be printed with the same. We can generate the QR code for each asset specifying the asset details. The software application will enable us to capture the complete details of the assets like name of the asset, purchase date, price, location, maintenance details, etc.

Assets are available in seven different locations of Veer-O-metals. One Data Management (Web application) server will be maintained in Central Zone. 3 client server (or Snub) will be placed in important location and data will be pushed to the central server thus collaborating all the information across seven units.

R - AIMS: This solution is built on Open Source. The solution can be accessed through username, user group and password identification. The solution will be simple to use and yet is rugged and helps in informed decision making while adding new assets.

- QR code was generated for each assets across the locations
- QR code label were fixed on the assets.
- Using the QR code scanner the asset identification and audit can be done.
- The **R - AIMS** captures the data of the assets right from Brand Name, Model Name, Type, Date of Procurement, Vendor, Asset Custodian (if required), Category, warranty and post warranty – AMC data can be loaded in the application against the Asset ID.
- **R - AIMS** generate reports on time scheduled basis
- **R - AIMS** can be utilized to also plan reutilization of assets, upgrades

System Architecture:
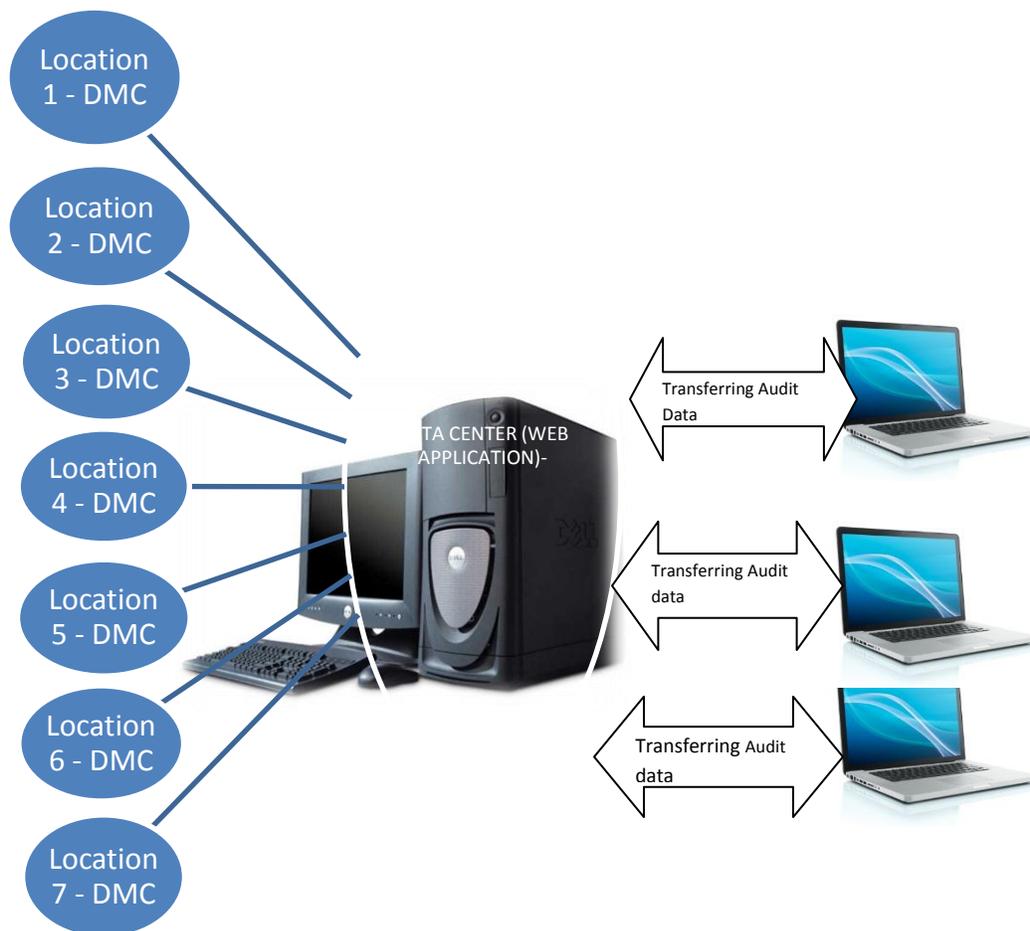
ROI / Benefits for Veer-O-Metals:

1. Quick Inventory visibility
2. Efficient handling of assets by incorporating preventive maintenance
3. Maximise the usage of inventory by continuous monitoring
4. Different levels of report generation for various hierarchy present in the company
5. Automated depreciation calculation for all assets

Conclusion:

The project has been successfully implemented in Veer-O- Metals and they have benefited in financial and productivity across the units. Centralized monitoring made the management to make quick decisions.