ASSET TRACKING SYSTEM FOR A LEADING OIL & GAS PLANT

CASE STUDY

FIRST DPM BASED ASSET MANAGEMENT SYSTEM IN UAE OIL & GAS INDUSTRY

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TOOL ROOM SCENARIO

Currently, the main tool room area of the GASCO Plant has close to 6000 assets. These include small tools items, chain hoists to large maintenance equipment's.

These assets are issued to workmen against requests and then returned back to the tool room. Some of these are also permanently issued out. They are tracked against the area they are sent out to. However primarily, the tracking is against the employee ID of the person who has issued the item.

The point of issue and return is a single workstation desk and is managed by 4 store keepers.

Currently, the asset register is maintained in an excel sheet and every time an asset is issued out, the details are updated by the storekeeper manually in the spread sheet. Same is done when the items are returned. The storekeeper also manually updates the asset register when new assets arrive, assets are scraped or are stolen.

Key problem areas:

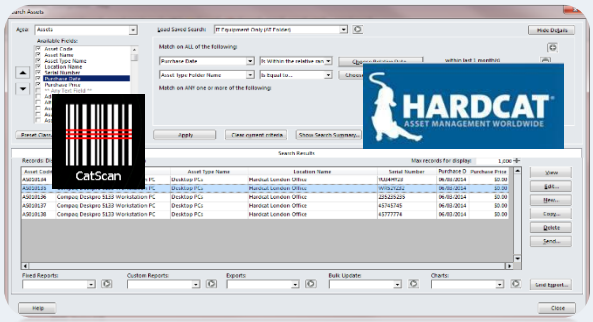
- No formal asset register.
- No asset tags or markings.
- No automated way of tracing which employee ID is issued what item.
- No product categorization.
- No issue and return history against each item.
- No system for inventory or maintenance audit.
- No standard list for location and people.
- No automated identification of employee whom the asset is issued.
- Spread sheet asset register has no security.
- No system transaction history available – who did what?

ADVANTAGES

- Reduce time to perform Workshop audit by **80%**.
- Reduce time to perform issue & return by **90%**.
- Reduce time to produce tool usage reporting by **80%**.
- Allow complete audit trail of each individual tool or piece of equipment.
- Monitor consumable stock natures, issue, usage, returns and stocks levels.
- Configuration & Setup in Hours not weeks or months as is the norm.
- Compliments your current as well as future ERP system.
- Off the shelf product, no hidden costs, completely affordable.

SOLUTION SEARCH & SELECTION

The level of detail you wish to record against asset records is up to you, but may include:



- Asset details (i.e. type, serial number, description)
- purchase price & current valuation
- Warranty/maintenance dates & costs
- Components and attachments.
- Complete movement and audit history by location, cost centre, or custodian.
- Associated asset management costs.
- Lease & rental information.
- Cost centre & ownership.
- Supplier and maintenance provider.
- Powerful custom user-definable fields by asset type (create fields that are relevant for the assets YOU manage).

BARCODE READERS

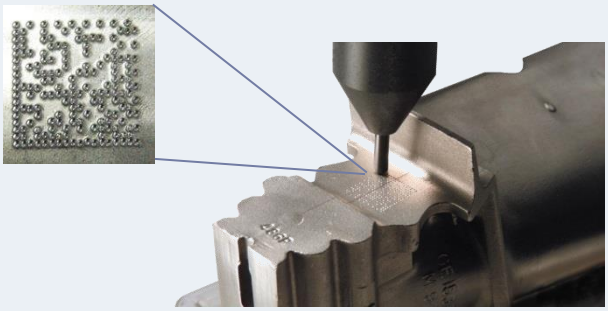
MC 9190

DS 6707 DP

- The MC9190-G offers the very latest in scanning technology, so no matter what type of bar codes you need to scan, whether they are near or far, or even damaged or dirty, you can count on the first time split second scanning.
- The Symbol DS6707-DP is a premier general purpose scanner, offering the maximum in data capture flexibility. The Symbol DS6707-DP is able to capture images and read virtually all 1D and 2D bar codes and direct part marks (DPM) — including the most challenging mark, dot peen.

TAGS

- **Direct Part Marking** involves permanently marking a readable code directly onto a product.
- 2D Data matrix is a unique "machine readable" symbol capable of storing large amounts of information within a small physical area.
- 2D Data matrix is the standard for Direct Part Marking.



Advantages

- A large amount of information in a small area.
- Absolute read accuracy.
- Built in error correction.
- Well suited for low contrast DPM marks.
- Wide adoption in many industries worldwide.
- Difficult to Duplicate.
- Permanent.
- Easy to apply.
- Cost effective.

- **Foil 2D Dot** is an ideal identification solution for small parts tracking - specializing in extreme conditions where abrasion and high temperatures may be an issue. The 2D DataMatrix ECC200 bar code symbology allows you to identify and track property as well as record calibration and maintenance information in one-tenth the space of traditional bar codes.

- Made of resilient photo anodized aluminum, the Foil 2D Dot Bar Code Label resists abrasion, solvents, sun, salt air, and high temperatures while the bar code and human-readable is sealed within the anodic layer of the Aluminium to protect readability.

- An image intensification process ensures the bar code will read every time even when exposed to damaging UV rays and high temperatures. Plus, because of the high redundancy within the Data Matrix bar code symbology, the bar code is still readable if as much as 60% of the image is destroyed.

DATA CONFIGURATION

- On basis of the inputs of the previous activity, we imported 5000 assets into the Hardcat system as the purchased system is licensed for the same.
- Each of the relevant information was imported in the system mapped with their same field names.
- There were some custom fields made for extra fields from the spread sheet and named with same field name again.
- Each record was allocated a unique asset code and barcode number, that is auto generated by the system in set pattern.
- Reports were mapped and report definitions were created in the system.
- Standard lists were generated for people, location and product type from the list of information supplied.
- System login user was created for the storekeeper.
- System was configured to login and arrive at 'Move asset' screen.
- Charts were made for applicable reports and the dashboard was added to arrive after login.

DATA IMPORT

- Total Imported records were as below;
  - Assets – 5000
  - People – 287
  - Asset Category – 319
  - Location - 223

END USER TRAINING

The Training phase included a formal walkthrough through the core, barcoding modules of the system in presence of all the relevant end users from the GASCO Team. The data that was utilized in the training session was the end product of the GASCO

Master Data Preparation phase and the Tagging / Data Capture Phase.

A test system was configured and made available with GASCO data for the end users to do hands on training.

Hence, the topics relating to the management of the asset data once entered into the system, was of prime importance, which was discussed and explained along with the GASCO Team.

At the conclusion of the training session, appropriate training materials including the below were provisioned to the GASCO Team.

- Training Agenda
- Training Attendance
- Process Flow Documents
- User Manuals
- Training Videos

SUPPORT

On basis of overall discussions during time spent on site and training session. Below are the details of support provided for GASCO Hardcat System.

- Software configuration & setup.
- IT Technical assistance.
    - Software installation.
    - Database backup.
    - Hardware troubleshooting.
    - Tagging machine troubleshooting.
    - Barcode scanner troubleshooting.
- Tagging activity.
- Barcode scanner configuration.

All issues-returns and tool audits are now automated and GASCO saves its Manpower and Time with Zero Human error.

HARDCAT is used in

- Oil & Gas
- Power
- Nuclear
- Aerospace
- Automobile
- Mining
- Police
- Government offices
- Defence
- Hospitals
- Banks
- Universities