

# **MMOG/LE Evaluation**

## **Data Collection Process Improvement**

# Freedom Technologies

## MMOG/LE Evaluation – Data Collection Process Improvement

### 1. STRATEGY AND IMPROVEMENT

#### 1.2 Objectives

1.2.2 **Key Performance Indicators (KPIs) shall cover objectives for all areas of the materials planning and Logistics process.**

**Why?** KPIs are used to identify the organization's current performance and areas for improvement.

**Freedom Technologies Response**

*Freedom Technologies' solution tracks delivery performance at the 862 level or ILVS as required. Comparisons can be made and graphed via Freedom Technologies' Andon Board Solution. Critical performance indicators can be displayed real time. Automatic escalation to supervisors/management can take place in the form of automated e-mails and automated pages for critical condition such as missed shipment. Freedom Technologies Andon, Scheduling and Production reporting can display and track production to schedule and provide the critical information to management as needed.*

#### 1.3 Measurement, Analysis and Action Plans

1.3.1 **Objectives are measured, analyzed, and action plans created where necessary.**

**Why?** Measurement and analysis is necessary to ensure awareness of current performance and to engage employees in the improvement process.

**Freedom Technologies Response**

*With the on-line planning and production analysis information available, aids in measuring, and analysis of action plans providing instant data allow for immediate follow-up of action plans. As action plans are placed into the production schedule, they are immediately reflected in the performance to actual and updated on production screens including Andon boards providing employees up-to-date information about all goals and current status thereof.*

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### 1.4 Continuous Improvement

**1.4.2** There shall be a process to identify and take corrective actions on deficiencies and/or unstable processes found during internal assessments.

**Why?** For organizations to remain competitive and reduce cost, specific areas of improvement need to be identified.

**F1** Reduction of complete physical inventories.

#### Freedom Technologies Response

*Freedom Technologies' provides an inventory method of tracking at either the part or the container level. This is done by providing a license plate (Serial Number) for each part or container. The process identifies inventory by unique identification and thus eliminates the "black hole theory" for inventory. This process, if properly implemented, can eliminate physical inventories and if not eliminated, it greatly reduces the time it takes to inventory by providing a scannable bar code vs. written inventory tags. This greatly increases inventory accuracy.*

## 3. CAPACITY & PRODUCTION PLANNING

### 3.2 Capacity Planning

**3.2.3** The organization implements measures to minimize obsolescence of Raw Material, WIP and Finished Goods.

**Why?** For obsolescence claims purposes, a process exists for recording and maintaining maximum material authorization from the customer.

#### Freedom Technologies Response

*Freedom Technologies' Kanban and "Pull" base software allows for product to be made only as scheduled. By utilizing MFG/PRO or 862's for scheduling eliminates over-production and minimizes obsolescence. This is also aided by the increase in inventory visibility provided by the license plating (serialization) of inventory which provides for near 100% inventory accuracy*

**3.2.4** There is a process to ensure the availability of service/spare parts.

**Why?** To satisfy the customer's need for spare parts without jeopardizing the production of current parts.

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### Freedom Technologies Response

*Spare parts are also inventories with a license plate (serial number) which insures inventory accuracy. This aids in providing accurate inventory results for availability of service/spare parts.*

### 3.3 Production Planning

3.3.1

**A process shall exist to plan production requirements and to maintain the parameters of the production planning system.**

Why?

A production planning and monitoring system contributes to both efficient information and material flow.

### Freedom Technologies Response

*As inventory accuracy increases utilizing Freedom Technologies' shop floor automated reporting system, this allows MRP or other scheduling systems to work with a high degree of accuracy.*

3.3.2

**The production scheduling system supports lean manufacturing (e.g., pull systems).**

Why?

To ensure production schedules reflect customer releases and shipping schedules.

### Freedom Technologies Response

*Freedom Technologies' shop floor system allows for integration to PLCs for container reporting and accuracy. This combined with Freedom Technologies' scheduling system, which displays on-line schedules at the beginning of each production line, allows for up-to-date schedule attainment information. This information can be accessed on-line and displayed on Andon Boards throughout the plant providing up-to-date information to all employees. In the case of critical lack of attainment, this can be triggered and the material manager / plant manager notified by automated page or e-mail.*

### 3.4 Systems Integration

3.4.1

**The customer information shall be processed directly into the organization's planning and scheduling systems.**

Why?

Direct electronic transfer of data will improve the transfer speed, reduce the possibility of error and reduce the cost.

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### Freedom Technologies Response

*Freedom Technologies' Shop Floor system is directly integrated to the planning and scheduling system including the customer release system.*

## 4. CUSTOMER INTERFACE

### 4.3 Shipping

4.3.1

**The organization controls its processes to assure that the physical shipments correspond with the customer demand.**

Why?

To ensure accurate shipment, container and label information and any other necessary documentation will fulfill customer requirements.

### Freedom Technologies Response

*Freedom Technologies' shipping software provides an interface between the requirements and the actual shipping. It provides for scanning a container to a shipment, verifying it is the correct quantity, going to the correct customer, has the correct label and label data including passback information, and provides instant information to stop over shipments and under shipments.*

4.3.3

**The organization inspects and calibrates all shipment quantity-determination equipment at planned intervals to an acceptable accuracy level, as defined by the customer.**

Why?

To ensure accurate shipment to the customer, all shipment determination equipment must be calibrated at planned intervals.

### Freedom Technologies Response

*Freedom Technologies offers many options to ensure container accuracy. We offer scale verification with weight conversion options. We also provide for scale planned maintenance notification as required. Some of our container verification options are: PLC count integration / part number verification tied to container label print; Scale count systems at end of line which verify and prompt the user for the correct container, and prompts the user to add inventory verifying quantity by weight and prompting users for separators when needed.*

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**5. PRODUCTION & PRODUCT CONTROL**

**5.1 Material Identification**

**5.1.1**                    **There shall be a process/method in place to ensure all parts are labeled accurately and identified easily.**

**Why?**                    Material that is improperly identified could result in misplaced material, lost time and/or production disturbances.

**Freedom Technologies Response**

*Freedom Technologies' software provides standard processes to tie into PLCs for part and quantity data and provides for the automation and accuracy for container labeling. When required, Freedom Technologies' software provides interfaces to Direct Part Marking equipment, including but not limited to; label printers, dot peen machines, lasers, ink jet and other marking devices. This capability provides users with the ultimate traceability and labeling process currently available.*

**5.2 Inventory**

**5.2.1**                    **The organization has one integrated system encompassing both perpetual inventory and associated financial functions (e.g., "one set of books").**

**Why?**                    To ensure that inventory transactions and balances are accounted for properly.

**Freedom Technologies Response**

*Shop floor inventory transactions are automated with count to container processes and associated labeling, thus insuring inventory accuracy. Since each label has a "license plate" that can be traced to the inventory quantities eliminating the "black hole" that we sometimes see which can create inventory discrepancies.*

**5.2.3**                    **The organization has a process to optimize the material flow.**

**Why?**                    The primary objective of a lean manufacturing/material flow process is to efficiently and effectively support the needs of the organization. As long as there is a need to move parts from one location to another there will be the opportunity to eliminate waste in the material flow process.

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### Freedom Technologies Response

*Freedom Technologies provides proper container labeling, which not only provides inventory traceability information but also provides birth history information that can be used to FIFO inventory to ensure inventory is properly utilized.*

5.2.4

**The organization has a process that ensures that all material records are maintained and accurate, and deviations investigated and corrected.**

### Freedom Technologies Response

*Freedom Technologies Software provides for automation of Cycle Count and Physical Inventory via the use of the container license plate (Serial Number) scanning process. We have various labeling processes to track and provide process completion information to know that processes have been completed in the proper order and provides a BOM on the label for manufacturing use. This is called the WIP Traveler Tag and accompanies the container through the manufacturing process.*

5.2.5

**The organization has a process in place to coordinate "phased out" inventories (e.g., those affected by engineering changes and programs that are being phased out) with both supplier and customer.**

### Freedom Technologies Response

*Freedom Technologies' software allows inventory visibility which also include EC Level. Therefore this can aid in the accuracy to "phase out" inventories.*

5.2.6

**The organization has a process to continuously evaluate and optimize inventory buffers.**

### Freedom Technologies Response

*With accurate inventory based on serialization, Freedom Technologies can aid in providing accurate buffer stock levels.*

5.2.7

**The organization shall have a process to identify and route defective/obsolete material in a timely manner. This process shall ensure that defective/obsolete material is segregated and disposed of properly (e.g., reworked or scrapped).**

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### Freedom Technologies Response

*Freedom Technologies' software identifies inventory at the container level with a serial record. Not only can we move the container to a "hold" area, we also can place a container itself on hold thus not allowing it to be transferred or shipped. We also maintain the record once the container comes off hold so we have complete visibility into why the container was placed on hold and why it was released, who released it and any other pertinent data.*

### 5.4 Traceability

5.4.1

**Where regulation and/or the customer requires traceability, a system that supports lot and/or serial traceability shall be in place.**

### Freedom Technologies Response

*Freedom Technologies software allows for Direct Park Marking for control at the part level. This includes the retention of production data including but not limited to test data info, production process info, material used in BOM as well as verification to the production process. If there isn't a requirement to do traceability at the part level through Direct Park Marking, the same process can apply at the container level. All information as previously described, can be retained at the container serial number level.*