

# MATERIALS MANAGEMENT NEWS

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## Message from the Chair

Terry Volpel, CPSM, C.P.M., SCMP, LSSBB

Welcome to the Fall 2015 Materials Management Group Newsletter. In this space I'd like to touch on some of our efforts as a group and as a Board. I'd also like to report some results that are exciting to us and some accomplishments in 2015. Finally, I'd like to honor a former MMG Chair who has sadly passed away.

When I accepted the Chair of the MMG over two years ago we had grown our membership under Karl Harward's leadership from about 1100 to about 2300. Currently we are just over 3700 members strong and the Board thanks each of you for your interest.

We are joined on the Board by Tom Tanel, who many of you already know and who led a sister group (Logistics & Transportation Group). Tom has authored articles for this newsletter as well as others.

The MMG won a Group/Forum Excellence award at the conference in Phoenix this year and Karl and I were proud to accept on your behalf.

Somehow I was awarded the Leadership of the Year Award for my work with the MMG and ISM—Canada where I serve as President/CEO. I still pinch myself about this.

*We learned, with great sadness, about the passing of Dr. Ken Killen. Dr. Killen was a previous Chair of the Materials Management Group and a J Shipman Gold Medal Award winner. A true giant in our field, he taught at Cuyahoga Community College and was very active in ISM. He co-authored books like "The Purchasing Handbook" and from 1988 to*

The Materials Management Group (MMG) promotes professional development, best practices and networking opportunities within ISM affiliates, Groups and Forums, and within our broad profession. In alignment with our mission, we are inviting our members to provide us with articles and best practices that may be shared among our readers. The content should be application focused and may cover all aspects of procurement, production planning, inventory management, warehousing, traffic, transportation and other related activities. Articles selected will be published in the MMG Newsletter, a bi-annual publication. MMG reserves the right not to publish articles it does not deem relevant or appropriate.

#### Guidelines for articles:

The article(s) may be submitted in a Word, Excel, or PowerPoint format.

- ⇒ Articles that reference supplier names and/or pricing will not be accepted for publication
- ⇒ Submission deadline is January 31, 2016 @ Midnight ET
- ⇒ Please submit your articles to Terry Volpel at [tvolpel@shaw.ca](mailto:tvolpel@shaw.ca)

We look forward to receiving your article.



## Supply Chain from the Past

*Kathleen Allen, CPSM, CPSD*

The field of supply chain is the art and science of the acquisition, allocation and flow of resources.

Today's world is full of large and diverse cities, which are huge consumers of resources and act as a network of interconnected hubs - an integral part of the flow of resources. Historically, there have been many complex and highly sophisticated cities, but the city of Rome is the lens through which we see the role of cities today. Rome was a city built upon the need for resources, specifically the sourcing and distribution of resources. From its formation to its role as a centralized point in the supply chain, Rome forms the foundation of our contemporary perceptions of the military, open commerce, and the concept of a modern city.

It is said that Rome was not built in a day. Rather, it evolved on an accelerated timeline to be the largest, most complex, and most powerful city in the world. Mythology as well as historical fact, inform us that the city was built by the twins Romulus and Remus, who were shepherds from the nearby hillside. As the first rule of real estate tells us, location is everything, and this was the first thing the two brothers considered. Romulus preferred the location of Palatine Hill while his brother was partial to an area known as the Aventine. Over time, Remus faded from the annals of history and Romulus presided as the leader of Rome.

Rome was the one of the progenitors of the idea of the great melting pot. The city grew as it offered asylum to those who were oppressed or were fleeing from injustice in their own land. During Romulus' time, Rome was a city of bachelors. The city, typical to its nature of growth by conquest, resolved this problem by obtaining women from nearby communities, particularly the hills of the Sabine, as well as bringing them as slaves from various conquests. Rome continued to grow, drawing its resources and its population from the lands that its disciplined military forces acquired.

As with every complex supply chain, logistical regimentation was needed to prevent chaos. Religious institutions were used to instill discipline, and organized temples were created. Public works and transportation networks evolved to accommodate the consumer needs of the city. Vast aqueducts moved valuable water. Bridges and roads allowed people and resources to flow in and out of the city as needed. A government was formed, dividing the population into classes: the common people, the plebeians, and the ruling class, the patriarchs. The emperor following Romulus refined the calendar, which had originally been set on a ten month cycle starting with March, named after Mars, the god of war. January and February were added to match the calendar more precisely with the lunar cycle. A trade system to accommodate the needs of the ever-growing population was de-

veloped. And the role of the military continued to grow, providing a viable occupation and a road to Roman citizenship for many of Rome's inhabitants.

The complex and all-encompassing global supply chain of today is the direct descendant of these concepts, as is the methodology developed to cope with a vast and varied population. The acquisition, allocation, and flow of resources were the key to the growth and influence of this ancient city, and this is still the key to our global economy today. From the ancient Romans to the present, these basic principles of supply chain span the arc of history.

*Kathleen Allen, CPSM, CPSD*



*Presenting the Leadership Person of the Year award to Terry Volpel at the 100th Annual Conference in Phoenix, AZ. are Tom Derry (ISM, CEO) and Melanie Larimer (Manager, Membership).*

## Taking Stock

Terry Volpel, CPSM, C.P.M., SCMP, LSSBB

Proper inventory management starts with knowing what you have in stock to work with. Without an accurate assessment of what is available off the shelf we cannot properly plan operations, sales or transfers to other plants. A certain level of trust in the numbers is critical for Sales people who are quoting delivery from stock on their quotes, to production planners. Having a high sense of trust in your inventory is critical to efficient factory planning. If the items are not actually in stock, the sales order is delayed and customers are not getting what they were promised. The factory can sit idle waiting for materials and customer demands are not met. A seasoned materials management system includes inventory verification (audit) and risk mitigation strategies to avoid stock outages.

There are many methods of taking a physical inventory count. The method of choice is often one that has been approved by a company's auditors to give them a comfort level that they can trust the resulting valuations.

Some companies only do a Physical Inventory Count once a year. Generally this is done within three months of the ending of the Fiscal year so the valuation as of that specific date can be accepted by the auditors.

Other companies prefer to cycle count to create a perpetual count

environment where certain items are counted every week/month. There are some companies that blend the two systems because of the advantages of both.

Most inventory systems use in-house staff drawn from their regular duties to do the counts so there is normally no extra cost to the company to do the count. Some companies outsource the function and teams of counters come in and do an entire count (usually on a weekend). Inside staff usually have a better idea of what the product is and can spot wrong items mixed in a bin more readily. External Inventory Takers can let the in-house staff continue their regular duties and may perform more of an unbiased count as they have no expectations of what they will find.

### Count Sheets Versus Blank Sheet Counting

My first physical Inventory Count was done in a record store (yes, vinyl records). Ten of us were each given a clipboard with a letter size pad of ruled paper and told to start at the front of an aisle and go through the records recording the sticker price and quantity. Back then the average record album price was fairly consistent so the count entries looked a bit like:

36 x \$7.99

12 x \$12.99

16 x \$7.99

27 x \$5.95

I understand now that the concept was to get an inventory value based on sell price because the markups were very simple and consistent so if the discount the retailer got from the record company was 25% then the value from the count multiplied by 75% gave a good net cost figure. The advantage of counting this way is that everything on a shelf is counted, even if it was there by mistake or miss-filed in a wrong section (Roy Orbison in with Chet Atkins). The counter assumes nothing and therefore documents everything. If someone comes across an item they cannot identify, a supervisor is called to solve the issue, identify the item and perhaps move it to its proper location if it is in the wrong bin. This kind of system is best when only financial information is required (Inventory asset valuation only) and the number of Roy Orbison albums is not required to be accurate.

## Taking Stock (Cont.)

Terry Volpel, CPSM, C.P.M., SCMP, LSSBB

The disadvantage with blank sheet counting usually is that the lists of items then have to be manually costed or at least entered into the ERP system. Additionally there may be multiple instances of the same item being counted at different locations and these need to be consolidated into one count before entry. Often a dedicated person collects the blank sheets as they are completed individually and transfers the data to a master list which is then entered after the count is done (or as the count is winding down).

Count Sheets inform staff what item numbers are available for counting. Using them as a guide (particularly if a warehouse location system is in place) can speed up the counting time. Count sheets are usually entered into ERP systems in a batch system (the sheets are numbered and entered in batches) so the count entry is faster. Multiple entries can be noted and documented so totals can be calculated. The disadvantage is that things on the shelf might get missed if they don't appear on the count sheet. A good training system is where these undocumented items are handwritten on a sheet and later on, someone can decide whether to just move the item to the proper location and adjust that count, or set the item up where it is and count it manually.

Some businesses mark or "tag" bins as they are counted and if something is "picked" before the count but after the cutoff, a note is put into the bin to alert the counter to add that quantity to the count.

This note needs to remain in the bin until all counts and re-counts are done. Someone then has to go around to each bin and remove the notes before the next inventory count is done. Some companies use colored dots to mark each bin that has been counted, using different color dots for each year.

One of the most important Inventory Control decisions which must be made is when it is appropriate to do an adjustment and when is it prudent to leave it alone. Let me illustrate with an example.

Sometimes we note a discrepancy in a material (perhaps a shortage) and adjust our records to write off the shrinkage. At a future count we then discover that material was always there, just hidden from view. So we add it back to stock. If this was an "A" class item in a cycle count system, we could get a series of negative and positive adjustments over time when that actual inventory was accurate all along, just miscounted

In my experience, adjustments should only be done at the time of a formal inventory count. If that is an annual count then cycle counting should not adjust any

counts. Discrepancies should be investigated and errors corrected only if cycle counts are the "formal" methodology, then only cycle counts should be used to make adjustments. If a cycle count finds an incomplete transaction (like an unreceived transfer) these need to be cleaned up before any net adjustments are done. In the case of A and B class items (see below) one should wait until two cycle counts have been done to confirm the discrepancy before just making adjustments.



## Taking Stock (Cont.)

Terry Volpel, CPSM, C.P.M., SCMP, LSSBB

### Annual Physical Count

The benefits to this system of physical inventory count are primarily skewed towards financial reporting (including taxation). This system allows a clear and definite cutoff point so one can say with a high degree of certainty that "at that moment" the inventory valuation was accurate. Recording the cutoff documents (Last PO issued, Last Sales Order issued, Last Receipt documented, etc.) delineates a clear cutoff point at which the inventory count is done, valued and recorded as of that "moment". Other advantages include participation of all Branch staff without any interruptions during the count.

Disadvantages revolve around the time it takes to do the count. As the paperwork cutoffs have been done by this time, business must stop until the count is valued and accepted as final. The count itself may take a day or more to do, re-counted items will take time to do and eventually someone has to stop the process as being "good enough" so that business can start again. While there are ways to work around this stoppage in business, the count process itself becomes more complex and time sensitive compared to a cycle count system.

The larger the SKU count in a formal physical inventory count, the more time consuming the counting and reconciliation is. One way to hasten the process is to do a "blank page" count.

### Cycle Counting

Cycle counting essentially divides the inventory into pieces or sub-groups to be counted over the course of a year. There are many ways to do this but the generally accepted way is to take advantage of the Pareto principle. Vilfredo Pareto was an Italian who postulated what has come to be known as the 80/20 rule. Pareto's initial 80/20 was about land in Italy when he noted that 80% of the land was held by 20% of the people. Applying that rule to Inventory Management postulates that 80% of inventory value is held by 20% of the inventory lines so that if your inventory is 1000 line items (SKUs), about 200 lines account for 80% of the total inventory value. In cycle counting this principle often leads to methodologies that have been developed suggesting that the 20% should be counted more often than the other 80%. Eventually this grew into the ABC Inventory Classification system that is still widely used today.

Because there are three levels in this system (A, B and C) the split is usually 80% 15% and 5%. Usually the splits are not so easily arrived at because of the valuations that are sometimes inherent in the inventory. A car dealer for example may have a total inventory of \$20M but \$19M may be cars.

Knowing what you have to sell, use, kit, etc. is as important as knowing when you can sell it, use it or send it to the production floor. The basic Procurement mantra is:

**The right piece at the right time in the right place at the right price.**

None of that is consistently possible without a trustworthy inventory. If someone can't trust what the computer says we have, every time a customer phones or the planning department issues a production order is an exercise in stress. Can we meet our commitments to our customer? Can we keep the shop floor running? It is up to the Materials Management department to take the guesswork out of inventory management.

That is why we are there, so others can sleep at night.

## Have a Better Idea?



Sometimes we have a thought, an idea or a concept. Sometimes we need to throw it up in the air and see which way the wind blows.

The Materials Management Group is exploring avenues for our members to have discussions, to throw out ideas or just to comment on current issues.

The MMG has a group on LinkedIn. With 681 current members this is an excellent place to publish your posts, start discussions and generally keep in touch with what is going on in our group. Managed by Karl Harward, the MMG is a great forum to join.