

Achieving Inventory Accuracy

A Guide to Sustainable
Class A Excellence in 120 Days

BY DONALD H. SHELDON, CFPIM, CIRM

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Dedication

Special love and thanks to
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and to God for his blessings.

Preface

It is curious...evidence suggests that more than 50 percent of North American businesses allow their inventory record accuracy to flounder below acceptable, cost-effective levels. Using the world as a base, accuracy habits are even worse. The ironic part about inventory inaccuracy is that it is one of the easiest process improvements to accomplish when the right process steps are implemented. It is also one of the more effective methods to aid in minimizing unnecessary costs.

The good news is that a robust inventory accuracy control process is not technology dependent. It is also not expensive or capital dependent and the effort will always produce returns far greater than the normal justification threshold for project expenditures. Neither bar code technology nor steel fencing will make accuracy a reality. Inventory record accuracy is simply a process control with the focus on consistency and discipline. It is easy to achieve and many businesses have proven it.

Organizations like Buker, Inc., from which I received my initial consulting exposure to the world's manufacturing, and like DHSeldon & Associates, where my experience continues, have worked with thousands of organizations all over the world. This experience has allowed the realization of common denominators and proven steps, the best of which have always (yes, always) resulted in predictable successful data accuracy. If the steps in this book are implemented conscientiously, the result will be sustainable, high levels of accuracy — every time!

This book is a summarization of my experiences, from both employers and clients. The objective of this text is to outline the steps required to achieve sustainable, high levels of inventory record accuracy. The result is

a step-by-step, day-by-day approach that, when followed, will reduce dramatically the variability and cost caused by inaccurate inventory balance data. It can be expected that these steps will give you the same results numerous others have seen before.

About the Author



Donald H. Sheldon is President of the DHSeldon & Associates consulting firm in New York. He started his career at The Raymond Corporation, a world-class manufacturer of material handling equipment. He held the position of Director and General Manager of Raymond's Worldwide Aftermarket Services Division when he left to accept the position of Vice President for Buker, Inc., of Chicago, a globally recognized leader in management education and consulting. While at Buker, Mr. Sheldon helped clients on every continent to achieve business excellence in numerous areas including inventory accuracy. After several years of traveling with Buker, Mr. Sheldon joined NCR Corporation, a client company, to work full time with its manufacturing facilities throughout Asia, Northern Africa, Europe, and the Americas. As Vice President of Global Quality and Six Sigma Services, Mr. Sheldon was directly involved in the process improvement health worldwide at NCR. In 2003, Mr. Sheldon, to continue to support his passion for coaching excellence, launched DHSeldon & Associates. He and his network of consultants continue to work with companies in North America to improve competitive advantage.

Mr. Sheldon has published numerous articles in journals and is co-author (with Michael Tincher) of the book *The Road to Class A Manufacturing Resource Planning (MPR II)*, published in 1995 and available at www.amazon.com. He has been a frequent speaker at colleges, interna-

tional conventions, and seminars including APICS (American Production and Inventory Control Society). He holds a Master of Arts Degree in Business and Government Policies Studies and an undergraduate degree in Business and Economics both from the State University of New York, Empire State College. He is certified by APICS as CFPIM (Certified Fellow in Production and Inventory Management) and as CIRM (Certified in Resource Management).

Mr. Sheldon can be contacted at www.sheldoninc.com.

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Many experienced and knowledgeable people influenced and helped put this book together. The vast experiences of manufacturing veterans including the following have given great help over the years:

- Mike Tincher, friend and President of Buker, Inc. and author of *High Velocity Manufacturing* (Buker, 1995) and co-author (with me) of *The Road to Class A Manufacturing Resource Planning (MRP II)* (Buker, 1995).
- Bob Wilkins, long-time friend and Director, Quality & Kaizen, Veeco Instruments and author of *The Quality Empowered Business* (Prentice Hall, 1994).
- Mike Stickler, friend and President of Empowered Performance, LLC.
- Paul Potter, friend and Executive Vice President of Buker, Inc. and author of *Inventory Record Accuracy Guaranteed!* (Buker, 2003).

These gentlemen have had an impact in my learning over the years, especially in the beginning of my consulting career, and I am grateful. Without their help, this book would not be a reality.

About APICS

APICS — The Educational Society for Resource Management is a not-for-profit international educational organization recognized as the global leader and premier provider of resource management education and information. APICS is respected throughout the world for its education and professional certification programs. With more than 60,000 individual and corporate members in 20,000 companies worldwide, APICS is dedicated to providing education to improve an organization's bottom line. No matter what your title or need, by tapping into the APICS community you will find the education necessary for success.

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Downloads available for *Achieving Inventory Accuracy: A Guide to Sustainable Class A Excellence in 120 Days* consist of slides covering Class A excellence in inventory accuracy and steps to achieving world-class performance including Class A ERP, best-in-class lean, and customer-focused quality (Six Sigma).

Understanding Data Integrity

It is amazing. Despite the fact that inventory accuracy is so easy to obtain and cost effective, it still eludes many manufacturing and service organizations. Even many of the larger companies still have data integrity issues that create unnecessary variation in their planning and manufacturing processes. The tragedy is the simplicity of the issue. It is really just a matter of management expectation.

Introduction

Inventory inaccuracy is a curable cancer that plagues more than half of the world's businesses. "Inaccuracy," as we will use it, refers to less-than-adequate process control over inventory piece-part location balance records. Accuracy is measured as physical quantity compared to the computer "perpetual" record where accuracy is only exact matches. The generally accepted minimum threshold of acceptability for inventory record accuracy is 95 percent in high-performance businesses. In other words, for every one hundred inventory balance records, ninety-five must be perfect.

When offsetting variation such as from currency-based metrics is used, accuracy is not posted accurately. The minuses offset the positive variances.

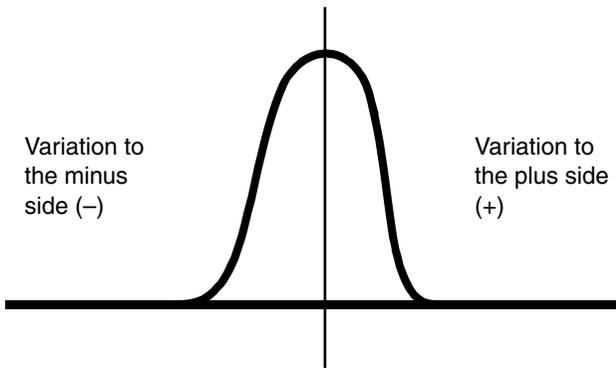


Figure 1-1. Variation curve for inventory inaccuracies.

Many organizations do not even track their accuracy on a day-to-day basis. These companies determine accuracy by the costly physical wall-to-wall inventory they take periodically, usually only once a year. When a periodic inventory is used, it is often to validate the company's valuation of inventory on its financial statements. Inventory accuracy must not be determined by currency valuations alone.

The laws of statistics remind us that in any random distribution of data, there will be an equal number of data points on the minus side of the bell curve as will be on the plus side when looking at inventory balance accuracy (see Figure 1-1). When currency is used, these data points offset each other, resulting in a false sense of accuracy. Every balance *could* be inaccurate, but the netting effect could and would probably show accuracy to be very close to perfect — often 99 percent or better. When piece-part balances are used in those same organizations and location balances compared, the true accuracy levels are exposed. The resulting measurement and performance understanding is much different. It often is a real eye opener!

Production planning systems use inventory balances, not the currency values, to support item planning. For this reason, it becomes important to seek high levels of process control at the item-quantity detail level.

Achieving inventory record accuracy requires a cultural shift in most organizations. The way organizations think and work has to change. The

Every organization that has implemented the steps outlined in this book has seen great benefits.

result of this change is usually a massive reduction (50 percent or more) in inventory that previously was needed to buffer the inaccurate item balances. In every organization

that has implemented the steps as outlined in this book, the results have included significant savings in overhead and inventory costs.

These savings come from reduced expediting, reduced priority freight, reduced overtime, smoother work flows, less inventory carrying costs, and higher customer service levels. And it is easy to do. Achieving inventory record accuracy is a matter of expectation!

Look at the banking business, for example. In every aspect of currency control, there are very high levels of inventory accuracy. Banks have such high accuracy levels that we as consumers come to expect it. Some warehouse managers have suggested that there is an association between pay scale and accuracy expectations and that low pay scales of stock pickers and material handlers are often at the core of data integrity issues. The bank model does not seem to prove that statement out. Most bank tellers get

It must be easier to do it right than to do it wrong!

pretty modest pay. The difference is expectation. When they do not balance at the end of the day, the tellers may be required to stay and reconcile. Do the storeroom clerks in your business do that? Most likely

they do not. Obviously, it is more sophisticated than simply expecting results and staying late to achieve them. It has a lot to do with understanding the processes and establishing controls on these processes. *It must be easier to do it right than to do it wrong!*

In the case of a manufacturing organization, raw material typically flows through a process while it is converted into finished goods that either ship directly to a customer, ship into distribution, or go into a storage area in anticipation of an order. In every area where inventory is “staged” for more than a few hours, some accounting of the inventory might take place. In many manufacturing organizations, this means that raw material balances, work-in-process balances, and/or finished goods inventory balances exist. Transactions typically happen at these “staging” points. Having high expectations and standards for transaction accuracy and robust process control is the only answer for predictability in the outcomes of these transactions. Just like the banking sector that understands and acknowledges its transaction points and inventory staging, the manufacturing organization needs to have process controls designed, procedures in place, people trained, results measured, *and* high expectations. The result is high levels of predictability, lower costs, and higher customer service.

It is not much different in a service company such as an airline. In an airline business, many service items and parts are kept on hand for quick