



Materials
Management
Group

ISM Materials Management News

October 2008, VOL 4, ISSUE 5

DEPARTMENTS IN THIS ISSUE:

Materials Management “Vanishing Manufacturing Jobs: The rise of the service parts business”

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CPSM Certification Corner “CPSM Study Materials, An Overview”

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Purchasing “I’m Still Worried”

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ISM Social Responsibility Principles

MMG LEADERSHIP

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About ISM

Founded in 1915, the Institute for Supply Management™ (ISM) is the largest supply management association in the world as well as one of the most respected. ISM's mission is to lead the supply management profession through its standards of excellence, research, promotional activities, and education. ISM's membership base includes more than 45,000 supply management professionals with a network of domestic and international affiliated associations. ISM is a not-for-profit association that provides opportunities for the promotion of the profession and the expansion of professional skill and knowledge.

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MANAGEMENT ROLE

Vanishing Manufacturing Jobs: the rise of the service parts business

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For years we have seen manufacturing jobs disappear and plants close all around us. Yet, U.S. manufacturing output has continued to increase, accounting for a world-leading output of \$1.6 trillion in 2007. Our manufacturing output has been increasing by about 3% per year, and currently accounts for about 12% of our GDP. So output increases even as employment decreases. Didn't the same thing happen in agriculture? The Council on Competitiveness says that "Low-value, commodity-based manufacturing is disappearing from the United States, moving to developing nations where routine manufacturing can be performed at low cost." Manufacturing's percentage contribution to the GDP will continue to decrease as the service sector of our economy has been growing at a faster rate.

So fewer supply management professionals are required to service an increased manufacturing output. How can we keep ourselves busy? What about the supply chain for service parts? An automotive spark plug might cost \$2. A Pratt and Whitney F100 jet engine for the F-15 fighter aircraft costs about \$8 million – with 2 engines per fighter. Both of these items are examples of service parts. The F-15 aircraft was manufactured from 1972 to 1999 and is expected to remain in service until at least 2014. The Air Force still has about 700 F-15s. While the initial manufacturing cost was \$48 million per aircraft, one updated aircraft is valued at about \$90 million today.

High-tech companies like IBM, HP and Cisco provide onsite service for their products. While product life cycles may vary from a few months to several years, the service life of those products can range from five years to several decades. As a result, large high-tech companies must support thousands of products with hundreds of thousands of parts. While one service technician may service equipment that contains 10 or 20 thousand replaceable parts, he can only carry about two hundred or so different parts in his car. Therefore, these companies maintain a network of stock locations to keep the least expensive and most frequently used parts close to the point of service and the more expensive less frequently used parts further away. Even though the number of different parts and locations is large, the demand rates on the vast majority of items are extremely low. This is one of the key differences between service and manufacturing or retail supply chains. At a car factory the number of wheels required might be four times the number of cars on the daily manufacturing plan. In field service, the number of wheels required at a dealer for a particular model of car might be less than one per week.

Motor vehicle networks carry many different parts. The number of models supported by a single dealer has grown. These networks are multi-enterprise, with inventory at the supplier, the manufacturer, independent distributors, dealers and local repair shops. They service an unknown and mobile equipment base. Multi-enterprise supply chains require a high degree of coordination and collaboration in order to meet customer needs.

Commercial aviation involves high shortage costs and expensive, repairable parts that require a complex repair and logistics process. For the airline passenger, a gate change may mean that they are going to fly in a different aircraft. A flight cancellation may mean that a replacement part or aircraft is simply not available. The airlines strive to maintain higher aircraft availability at lower costs. In Defense, the repair chain focuses on aircraft and weapon system availability. Parts like jet engines are designed so that service personnel can quickly remove and replace subassemblies and send them off for repair. These subassemblies contain other lower subassemblies, in a product design we call multi-indenture. These systems are repaired in complex networks where the simplest repairs can be performed at air bases, while more complex repairs and overhauls go upstream to intermediate facilities, depots and OEMs.

As manufacturer's products have evolved to become similar in their capabilities and features, product selection has become more price-driven, resulting in reduced market prices and small product margins. While product margins are thin, service margins for high-end industrial equipment are typically in the area of 35%. Even higher margins are possible when there is a high cost for downtime, such as MRI machines in hospitals and servers for the New York Stock Exchange during trading hours.

Applying state-of-the-art techniques, supply management professionals are making significant improvements to service parts management operations such as 30% inventory reductions, 50% increases in turns, double-digit increases in service level, and 40% labor reductions. Forecasting is a key function in managing parts supply chains. Forecasting methods usually fall into two categories: statistical methods that track levels, trends and seasonality from history; and causal methods based on factors such as install-base size, machine actuations, flight hours or takeoffs and landings. Inventory optimization methods model supply chain relationships and recommend stock levels for every part number to enable maximum levels of service at minimum cost.

The service parts business offers greater profit margins than commodity-based manufacturing, but requires supply chains that are more complex and less predictable. Recent years have seen the development of tools that manage and globally optimize complex service networks across an extended enterprise, including parts logistics and inventory. These tools enable organizations to monitor materials flow in real time and adapt quickly to changes, resulting in cost savings, faster customer service, and a competitive advantage. The service parts supply chain represents a great challenge and opportunity for the supply management professional. We are well equipped and up to the task.

CPSM CERTIFICATION CORNER

CPSM STUDY MATERIALS, AN OVERVIEW

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OVERVIEW

In May ISM began shipping the last of the Certified Professional in Supply Management (CPSM) materials tailored for those preparing for the three CPSM examinations. They now include the **CPSM Study Guide** and the **ISM Professional Series**. Some may find an additional item, the **ISM Glossary of Key Supply Management Terms (4th Edition)** to be a useful study aid.

The following reviews these items, describes how they relate to the three CPSM examinations, and provides pricing and ordering information. All items can be ordered online at www.ism.ws or by calling ISM customer service at 800-888-6276, extension 401.

THE CPSM STUDY GUIDE

The study guide is organized into three books. The first book consists of two sections:

- The first section introduces the reader to the study guide, explains the purpose of the CPSM examination, discusses the construction and technical details of the examination process, and provides an overview of the CPSM examination and the CPSM bridge examination.
- The second section presents the study guide portion of Examination #1. It is organized into six “component areas”. Each component area is further divided into tasks. In Examination #1 there are a total of twenty-five tasks. The numbering of tasks is based on the component areas. For example the first component area, “Contracting and Negotiating” is divided into five tasks numbered 1-A-1 through 1-A-5. Content is well organized and presented. An additional feature is that material covered in the CPSM bridge examination is shown in brackets. This means that those studying for the CPSM bridge examination need only focus on the bracketed portions.

CPSM CERTIFICATION CORNER

The second book presents the study guide portion of Examination #2. The second examination is organized into eight component areas and twenty-four tasks. Again the task numbering is based on the component areas. For example, the tasks for component area "Forecasting" are 2-A-1, 2-A-2, and 2-A-3. As discussed earlier, the material covered on the CPSM bridge examination is bracketed.

The third book presents the study guide portion of Examination #3. This examination is organized into three component areas and thirty-two tasks. Again, the numbering of tasks follows the format discussed previously and material for the CPSM bridge examination is bracketed.

The quality of paper and printing of the *CPSM Study Guide* are first rate. Each of the three volumes has its own index (which is useful when cross-referencing topics across examinations and tasks), the margins are wide (to facilitate note-taking while studying), and the bindings are large spirals (that should keep the study guide from becoming shop worn with constant use).

Overall, the *CPSM Study Guide* is essential for those studying for the CPSM three-part examination or the single C.P.M to CPSM bridge examination. The study guide is also an excellent desk reference for all supply management professionals.

Ordering information and pricing for the *ISM STUDY GUIDE*:

Item Number: CPSMSG1 **Price:** \$59/ISM members, \$89/nonmembers. There are discounts for orders of 13 or more copies (15%) or 31 or more copies (>25%). See the ISM website for details. All prices are plus shipping.

ISM PROFESSIONAL SERIES

This three-book series examines the subject matter covered in the *CPSM Study Guide* in greater depth. Each book emphasizes the content of one of the CPSM examinations. However, unlike the *CPSM Study Guide* the contents of these books are not keyed to the tasks covered in each examination, nor do they identify topics needed for the CPSM bridge examination. The following briefly reviews the three books, provides my impressions, and gives pricing and ordering information.

Foundations of Supply Management covers the content of CPSM Examination #1 in greater depth than provided by the study guide. Organization focuses on topics of supply management rather than on the tasks of the CPSM specifications. In addition, coverage in this volume emphasizes greater understanding than the topical outlines in the study guide.

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Effective Supply Management Performance discusses the content of CPSM Examination #2. While similar in approach to *Foundations of Supply Management*, the preface of *Effective Supply Management Performance* includes a cross reference between the tasks of Examination #2 and its eleven chapters.

Leadership In Supply Management, addresses the content of CPSM Examination #3. This volume addresses the broader, general management, issues that supply management faces in the current environment. Again, content is greater in depth and less focused on the specific tasks of Examination #3.

Overall Impressions of the ISM Professional Series

The three books in the ISM Professional Series provide comprehensive coverage of the topics relevant to the CPSM examination and the supply management profession. The preface of each book ties the contents of that book to an overall model of the strategic supply process, shown as Figure P-1 in each book. The three main categories of this process (Overarching Concerns, Process Steps, and Supporting Structures) are further organized into sub-categories. Chapter coverage of each sub-category is summarized, making it possible for someone studying for the CPSM Examinations to cross-reference topics among the three books. Overall, the three-book ISM Professional Series provides a source of information that complements the *ISM Study Guide*.

Ordering information for the ISM PROFESSIONAL SERIES:

***Foundation of Supply Management* – Book 1 of the ISM Professional Series.**

Item Number: PS1

***Effective Supply Management Performance* – Book 2 of the ISM Professional Series. Item Number: PS2**

***Leadership in Supply Management* – Book 3 of the ISM Professional Series. Item Number: PS3**

***ISM Professional Series (All three books as a set).* Item Number: PS4**

Price per book (PS1, PS2, or PS3): \$85/ISM members, \$115/nonmembers. There are discounts for orders of 13 or more copies (15%) or 31 or more copies (>25%). See the ISM website for details. All prices are plus shipping.

Price for the three-book series as a package (PS4): \$195/ISM members, \$280/nonmembers. There are discounts for orders of 13 or more copies (15%) or 31 or more copies (>25%). See the ISM website for details. All prices are plus shipping.

CPSM CERTIFICATION CORNER

ISM GLOSSARY OF KEY SUPPLY MANAGEMENT TERMS (4TH EDITION):

While the *CPSM Study Guide* refers to many definitions, this publication provides a concise list of supply management definitions.

Ordering information for the ISM GLOSSARY OF KEY SUPPLY MANAGEMENT TERMS (4TH EDITION):

Item number: GL2. Price: \$30/ISM member, \$50/nonmembers

CONCLUSION

For those studying for the CPSM examinations the *ISM Study Guide* will be crucial. For many others *ISM Professional Series* will be an important source of additional information that completes the necessary knowledge base needed to pass the three CPSM examinations. The *ISM Glossary of Key Supply Management Terms (4th edition)* is a useful reference that many will find useful.

QUESTIONS ON CERTIFICATION? CHECK THE INSTITUTE FOR SUPPLY MANAGEMENT WEBSITE AT www.ism.ws THEN CLICK ON "PROFESSIONAL CREDENTIALS."

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PURCHASING

I'M STILL WORRIED...

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In August of 2007 I wrote an article for this publication titled "I'm Worried". It focused on things that worried me as a supply chain management professional, college professor, writer, and consultant. Well, a year has gone by and I'm still worried. Here are another 50 things that still worry me. Sorry if there is some overlap. While I'm not looking at my last piece as I write this, some things are still unresolved. I think I'm even worrying more!

1. I'm worried about high fuel prices and what it is doing to our businesses and families.
2. I'm worried about geopolitical instability.
3. I'm worried about hurricanes, blizzards, and earthquakes disrupting the transportation network.
4. I'm worried that too many decisions are being made outside of the supply chain management organization.
5. I'm worried that my friends cannot find purchasing jobs with growth potential and stability.
6. I'm worried that senior management still doesn't quite understand what we do.
7. I'm worried that as I get older sales people seem to be getting younger.
8. I'm worried that technology will replace people skills.

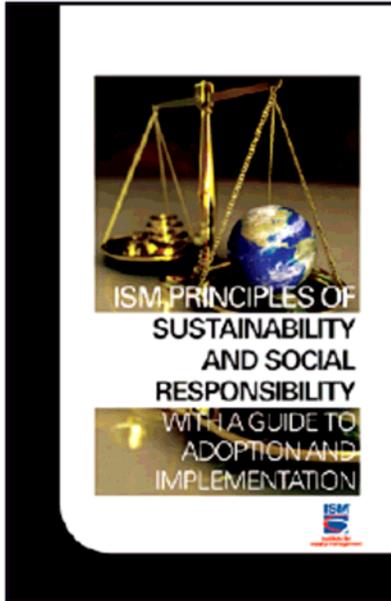
11. I'm worried that newspapers will disappear, and with it investigative journalism.
12. I'm worried about supply management staffing levels.
13. I'm worried that requisitioners are getting too much power.
14. I'm worried that the green movement is just a fad and not a long term objective.
15. I'm worried that more supply chain professionals don't join professional associations.
16. I'm worried that manufacturing is under such intense cost pressure.
17. I'm worried that too many minimize the importance of the service spend.
18. I'm worried that some feel technology is the cure for everything.
19. I'm worried that data trends are measured in days and weeks not months and years.
20. I'm worried that no one has a personal five year plan.
21. I'm worried that no one seems happy in the workplace (well, most workplaces).
22. I'm worried that people cannot seem to be nice to each other anymore.
23. I'm worried that people don't keep their resumes updated.
24. I'm worried about counterfeit products.
25. I'm worried about the lack of truckers.

31. I'm worried about negativism in the workplace...starting at the top.
32. I'm worried about workplace violence.
33. I'm worried about those who don't know where their products are coming from.
34. I'm worried about those who cannot write a clear and concise business memo.
35. I'm worried that the pressures of home are finding their way into the workplace.
36. I'm worried that the pressures of the workplace are finding their way into the home.
37. I'm worried that weekends seem to be getting shorter....and include work.
38. I'm worried that customer and supplier loyalty is becoming a thing of the past.
39. I'm worried that relationships are destroyed for seemingly pennies.
40. I'm worried that too many people are counting down to retirement.
41. I'm worried that more don't worry about supply chain risk.
42. I'm worried that we've almost made supplier visits extinct.
43. I'm worried that more don't understand fundamental business practices such as economics and finance.
44. I'm worried that we don't have the time to sit and think.
45. I'm worried about knee-jerk governmental regulations that hurt rather than help.
46. I'm worried about greed in the workplace.
47. I'm worried that we seem to lack confidence in our abilities.

ISM – Social Responsibility Principles

ISM Introduces Updated Social Responsibility Principles

Commitment to sustainable and socially responsible behavior is good business — in both the public and private



sectors, and both domestically and internationally. With the belief that supply management is in a key position within organizations to promote social responsibility, in 2004 ISM launched the *Principles of Social Responsibility*. This document has recently been updated for added emphasis on sustainability, including it both as a standalone principle as well as incorporating the concept into each of the existing principles.

The descriptive statements for each principle have been revised to reflect ISM's increasing international focus. Other changes to the principles include: (1) the Diversity principle has been separated into two principles: Diversity and Inclusion — Workplace and Diversity and Inclusion — Supplier Base, (2) the Safety principle now addresses Health and Safety and (3) the Ethics principle now addresses Ethics and Business Conduct.

The updated ISM *Principles of Sustainability and Social Responsibility* are:

1. **Community.** Community initiatives provide resources to support the community in which the company or organization operates.
2. **Diversity and Inclusiveness — Supply Base.** Supply base diversity and inclusiveness refers to efforts to engage different categories of suppliers in sourcing processes and decisions.
3. **Diversity and Inclusiveness — Workforce.** Workforce diversity and inclusiveness refers to efforts to attract and retain a workforce that represents the varied backgrounds of the customer and community in which the organization operates.
4. **Environment.** Supply management actions and decisions that promote protection and preservation of the

health and vitality of the environment within which the organization operates.

5. **Ethics and Business Conduct.** Ethical behavior and business conduct is a critical element impacting personal, business (public and private), supplier and governmental relationships and governance.
6. **Financial Responsibility.** Financial responsibility refers to understanding and applying financial concepts to supply management decisions to address allocation of funds, accurate reporting and management of risk.
7. **Human Rights.** Human rights refer to the concept of human beings having universal natural rights, or status, regardless of legal jurisdiction or other localizing factors.
8. **Health and Safety.** Health and safety refer to the condition of being protected or free from the occurrence of risk of injury, danger, failure, error, accident, harm or loss.
9. **Sustainability.** Sustainability refers to the ability to meet current needs without hindering the ability to meet the needs of future generations in terms of economic, environmental and social challenges.

For additional details on the updated principles and the complete *ISM Principles of Sustainability and Social Responsibility With A Guide to Adoption and Implementation*, visit the ISM Web site at www.ism.ws/sr.

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