



*June 23-26, Anaheim, California*




# AN EXPLORATORY ANALYSIS OF AN ASSET MANAGEMENT BODY OF KNOWLEDGE

Dr. Douglas N. Goetz, CPPM, CF

*2014 National Education Seminar*





Copyright © GP Consultants LLC 2014




## PAST PRESENTATIONS

- In 2005 at the NPMA NES in Nashville TN I offered a presentation entitled “The Education of a Property Professional.”
- **Topics Covered:**
  - Historical View of Property
  - Professions
  - DOD Educational Requirements
  - MARGINALITY of a Profession
  - NPMA Associate Degree Efforts
  - Other Career Fields
  - Futures





*2014 National Education Seminar*




## PAST PRESENTATIONS

- Much of what I said then is still true today.
- I've done other presentations on the:
  - LITERATURE OF PROPERTY MANAGEMENT
  - RESEARCH IN PROPERTY MANAGEMENT
  - SOCIOLOGICAL CONSTRUCTS IN PROPERTY MANAGEMENT
- So, I like to look at things as they are – and then at what they **MIGHT BE!!!**






*2014 National Education Seminar*

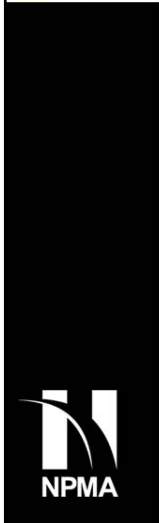


## THIS PRESENTATION

- **BUT**, this time I wanted to **DIVE DEEPER** into an area that we have done well in and at – but that we now **MAY** have to take a different tack!



*2014 National Education Seminar*

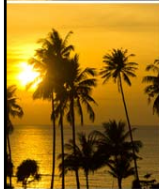


## MY WORLD

- **MY focus has been, over the past 30 Plus years DOD Contract Property Management and Education**
  - Whether that was the DOD Property Manual
  - The FAR Rewrite
  - AFIT, or DAU or NPMA Courses
- **Everything I have done I have always looked to see HOW something could be presented as an EDUCATIONAL EVENT!**






*2014 National Education Seminar*



## PAST DOD CURRICULUMS AFIT - 1984 to 2000

- |                      |                       |
|----------------------|-----------------------|
| • <b>1984</b>        | • <b>2000</b>         |
| • <b>TWO COURSES</b> | • <b>FIVE COURSES</b> |
| – PPM 151            | – IND 101             |
| – PPM 300            | – IND 102             |
|                      | – IND 103             |
|                      | – IND 201             |
|                      | – IND 202             |

*2014 National Education Seminar*

## PAST DOD CURRICULUMS

- **DAU – 2000**
  - IND 101 – Contract Property Fundamentals
  - IND 103 – Contract Property Management Systems Analysis
  - IND 202 – Intermediate Contract Property Management
- **PRESENT STATE**
- **DAU – 2014**
  - IND 105 – Contract Property Fundamentals
  - IND 205 – Intermediate Contract Property Management

*2014 National Education Seminar*





## DOD CONTRACT PROPERTY COMPETENCIES

- **COMPETENCY STUDY FOR DOD**

**Industrial and Contract Property Management (Property) Workforce Competency Assessment Report**

CRM D0025814.A1/Final  
September 2011



– <https://dap.dau.mil/workforce/Documents/Comp/DoD%20ATI%20Defense%20Acquisition%20Workforce%20Competency%20Model%20-%20Property.pdf>

*2014 National Education Seminar*








## Other Federal Agencies

- I wanted to look at the entire Federal Government and ITS planning for education.
- That took me to the Federal Acquisition Institute (FAI)

Established in 1976 under the Office of Federal Procurement Policy Act, the Federal Acquisition Institute (FAI) has been charged with fostering and promoting the development of a federal acquisition workforce. FAI facilitates and promotes career development and strategic human capital management for the acquisition workforce.

- <http://www.fai.gov/drupal/about/about-fai>

*2014 National Education Seminar*

## Other Federal Agencies

- DOE
  - Check out [http://energy.gov/sites/prod/files/ACMP%20PPM%20\(Property\)%20Certification%20Requirements.pdf](http://energy.gov/sites/prod/files/ACMP%20PPM%20(Property)%20Certification%20Requirements.pdf)
  - <https://www.directives.doe.gov/directives-documents/0580.1-EGuide-1>
- NASA
  - <http://ld.hq.nasa.gov/cpm.html>

*2014 National Education Seminar*



## Other Federal Agencies

- And I just HAD to share this one with you!!!



**O\*NET OnLine**  
A proud partner of the americanjobcenter network

Occupation Quick Search:

[Help](#)
[Find Occupations](#)
[Advanced Search](#)
[Crosswalks](#)
[Share](#)
[O\\*NET Sites](#)

**Details Report for:** Updated 2010  
**13-1041.04 - Government Property Inspectors and Investigators**



Investigate or inspect government property to ensure compliance with contract agreements and government regulations.

**Sample of reported job titles:** Housing Quality Standard Inspector (HQS Inspector), Housing Inspector, Asset Manager, Quality Assurance Specialist, Airport Operations Officer, Housing Management Representative, Inspector, Construction Inspector, Quality Control Manager, Sanitation Inspector


- <http://www.onetonline.org/link/details/13-1041.04>




*2014 National Education Seminar*

## So, where does this take us? Competencies are **CRITICAL** in designing education – but I wanted to look at the Concept of a **“Body of Knowledge”** (BOK)



*2014 National Education Seminar*




## BODY OF KNOWLEDGE

- A body of knowledge (BOK or BoK) is the complete set of concepts, terms and activities that make up a professional domain, as defined by the relevant learned society or professional association. A body of knowledge is the accepted ontology for a specific domain. A BOK is more than simply a collection of terms; a professional reading list; a library; a website or a collection of websites; a description of professional functions; or even a collection of information.
  - [http://en.wikipedia.org/wiki/Body\\_of\\_Knowledge](http://en.wikipedia.org/wiki/Body_of_Knowledge)

SO, you want to know what ONTOLOGY MEANS???

A particular theory about the nature of being or the kinds of things that have existence.




*2014 National Education Seminar*



## BODY OF KNOWLEDGE

- The core teachings, skills and research in a field or industry. The body of knowledge (BOK) often forms the foundation for the curriculum of most professional programs or designations. It is the essential competencies mastered by members, to receive accreditation before applying these principles in practice. Mastery of the body of knowledge is generally demonstrated by passing rigorous examinations at single or multiple levels.
  - <http://www.investopedia.com/terms/b/body-of-knowledge.asp>

*2014 National Education Seminar*




## BODY OF KNOWLEDGE

Meneely defines the body of knowledge as,


- “A conceptual framework that is systematized about a central theme and formulated through the process of definition, classification and analysis with reference to the discovery of general concepts, theories, laws and/or principles. The body of knowledge is the keystone of a profession and provides the baseline for the development of education and training materials and certification requirements for its membership . It encompasses both theory and practice.”

- Contract Management Body of Knowledge (CMBOK) Fourth Edition, 2013

*2014 National Education Seminar*








## EXAMPLES OF OTHER BOKS


- **PROJECT MANAGEMENT INSTITUTE (PMI)**

- **They are like us!!!**
  - A PROFESSIONAL Association that participates in developing STANDARDS
- **They have a “PMBOK” GUIDE AND STANDARDS**

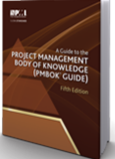
*2014 National Education Seminar*



## EXAMPLES OF OTHER BOKS








**A Guide to the Project Management Body of Knowledge (PMBOK® Guide)—Fifth Edition**

The PMBOK® Guide—Fifth Edition is the preeminent global standard for project management. It provides project managers with the fundamental practices needed to achieve organizational results and excellence in the practice of project management.

Like previous editions, this standard presents generally recognized good practices and reflects continually evolving knowledge.

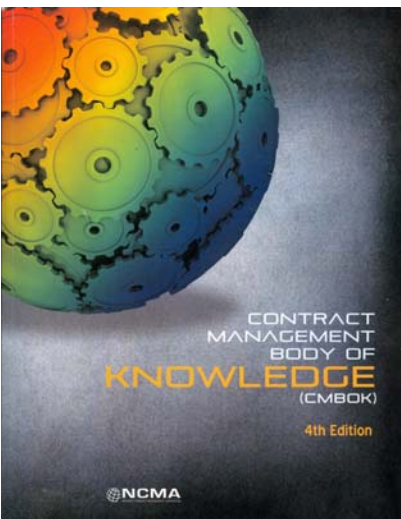
- [http://www.amazon.com/Guide-Project-Management-Body-Knowledge/dp/1935589679/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1401658229&sr=1-1&keywords=pmbok#reader\\_B00BR3P4IC](http://www.amazon.com/Guide-Project-Management-Body-Knowledge/dp/1935589679/ref=sr_1_1?s=books&ie=UTF8&qid=1401658229&sr=1-1&keywords=pmbok#reader_B00BR3P4IC)

*2014 National Education Seminar*

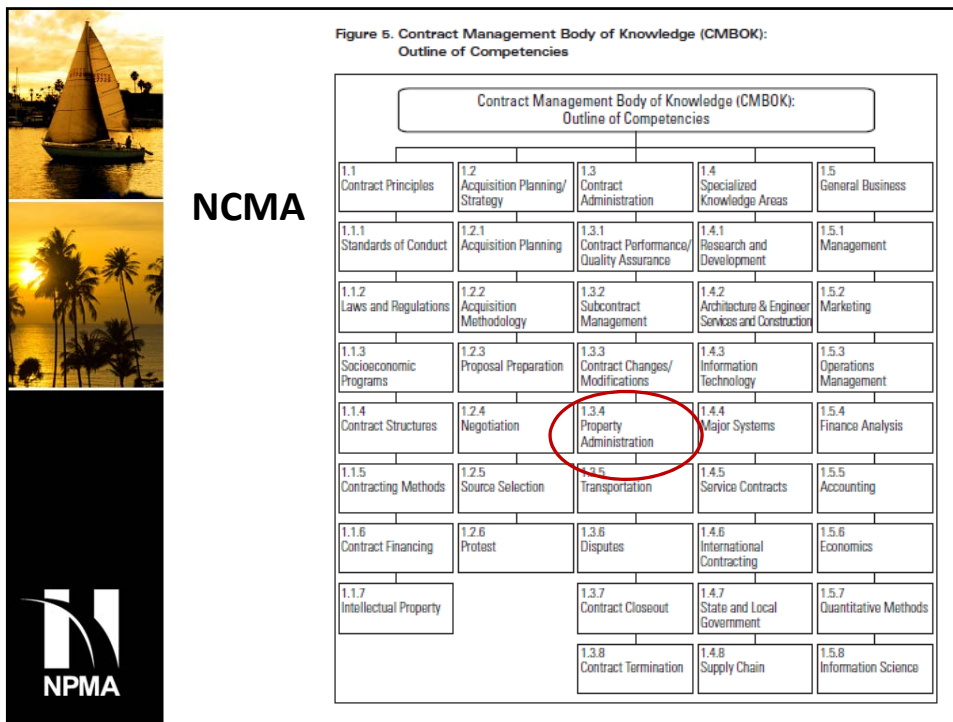




## EXAMPLES OF OTHER BOKs

**National Contract Management Association**



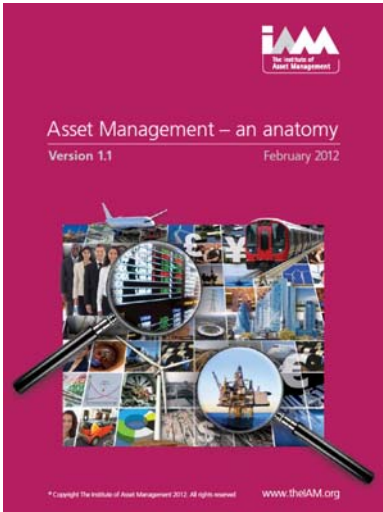
*2014 National Education Seminar*




**EXAMPLES OF OTHER BOKs**




**Institute Of Asset Management**

I applied to IAM as I wanted to be a “Member” of IAM. I had to document my knowledge and abilities.



*2014 National Education Seminar*



## EXAMPLES OF OTHER BOKs

Institute  
Of Asset  
Management

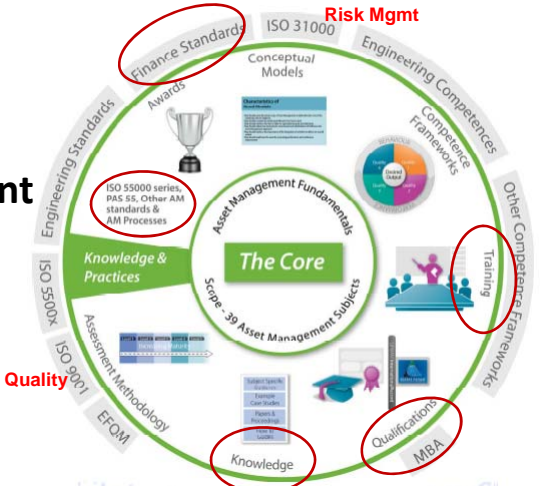


Diagram 1: Asset Management Landscape

*2014 National Education Seminar*








Contents




|        |                                                  |    |
|--------|--------------------------------------------------|----|
| 1      | <b>INTRODUCTION</b>                              | 1  |
| 2      | <b>WHAT DOES 'ASSET MANAGEMENT' MEAN?</b>        | 5  |
| 3      | <b>CONCEPTS AND PRINCIPLES</b>                   | 7  |
| 4      | <b>THE SCOPE OF ASSET MANAGEMENT</b>             | 15 |
| 5      | <b>SUBJECTS GROUPS AND DESCRIPTIONS</b>          | 19 |
| 5.1    | <b>ASSET MANAGEMENT STRATEGY &amp; PLANNING</b>  | 19 |
| 5.1.1  | Asset Management Policy                          | 20 |
| 5.1.2  | Asset Management Strategy                        | 21 |
| 5.1.3  | Demand Analysis                                  | 22 |
| 5.1.4  | Strategic Planning                               | 23 |
| 5.1.5  | Asset Management Plans                           | 24 |
| 5.2    | <b>ASSET MANAGEMENT DECISION-MAKING</b>          | 25 |
| 5.2.1  | Capital Investment Decision-Making               | 27 |
| 5.2.2  | Operations & Maintenance Decision-Making         | 28 |
| 5.2.3  | Lifecycle Cost & Value Optimisation              | 29 |
| 5.2.4  | Resourcing Strategy & Optimisation               | 30 |
| 5.2.5  | Shutdowns & Outage Strategy & Optimisation       | 31 |
| 5.2.6  | Ageing Assets Strategy                           | 32 |
| 5.3    | <b>LIFECYCLE DELIVERY ACTIVITIES</b>             | 34 |
| 5.3.1  | Technical Standards and Legislation              | 35 |
| 5.3.2  | Asset Creation and Acquisition                   | 35 |
| 5.3.3  | Systems Engineering                              | 37 |
| 5.3.4  | Configuration Management                         | 38 |
| 5.3.5  | Maintenance Delivery                             | 39 |
| 5.3.6  | Reliability Engineering & Root Cause Analysis    | 40 |
| 5.3.7  | Asset Operations                                 | 41 |
| 5.3.8  | Resource Management                              | 42 |
| 5.3.9  | Shutdown & Outage Management                     | 43 |
| 5.3.10 | Incident Response                                | 43 |
| 5.3.11 | Asset Rationalisation and Disposal               | 44 |
| 5.4    | <b>ASSET KNOWLEDGE ENABLERS</b>                  | 45 |
| 5.4.1  | Asset Information Strategy                       | 46 |
| 5.4.2  | Asset Knowledge Standards                        | 47 |
| 5.4.3  | Asset Information Systems                        | 47 |
| 5.4.4  | Asset Data & Knowledge                           | 48 |
| 5.5    | <b>ORGANISATION AND PEOPLE ENABLERS</b>          | 49 |
| 5.5.1  | Contract & Supplier Management                   | 50 |
| 5.5.2  | Asset Management Leadership                      | 51 |
| 5.5.3  | Organisational Structure & Culture               | 52 |
| 5.5.4  | Competence & Behaviour                           | 52 |
| 5.6    | <b>RISK &amp; REVIEW</b>                         | 54 |
| 5.6.1  | Criticality, Risk Assessment & Management        | 55 |
| 5.6.2  | Contingency Planning & Resilience Analysis       | 56 |
| 5.6.3  | Sustainable Development                          | 57 |
| 5.6.4  | Weather & Climate Change                         | 57 |
| 5.6.5  | Assets & Systems Change Management               | 58 |
| 5.6.6  | Assets & Systems Performance & Health Monitoring | 59 |
| 5.6.7  | Management Review, Audit & Assurance             | 60 |
| 5.6.8  | Accounting Practices                             | 61 |
| 5.6.9  | Stakeholder Relations                            | 61 |






# DOES NPMA HAVE A BOK?

## *ABSOLUTELY!!!*




*2014 National Education Seminar*









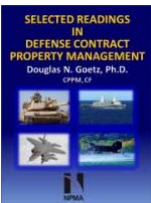
# EXISTING NPMA BOK

- Fundamentals of Personal Property Management
- Intermediate Studies Manual
  - Supplement: **Corporate** Property Management Studies
  - Supplement: Government **Contracts** Property Management Studies
  - Supplement: **College and University** Property Management Studies
  - Supplement: **Federal Property** Management Studies
  - Supplement: **State and Local** Government Property Management Studies


*2014 National Education Seminar*



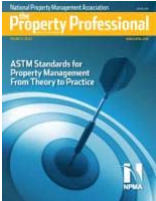
## EXISTING NPMA BOK

*2014 National Education Seminar*



## EXISTING NPMA BOK




And of course...


# “The PROPERTY PROFESSIONAL”

and the

# “JOURNAL OF PROPERTY AND ASSET MANAGEMENT”




*2014 National Education Seminar*



## But is that enough?

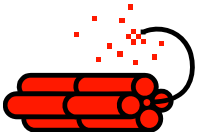
- Is that enough to claim that we have a BOK?
  - Yes, but that should never be STATIC!
- As an **academic**, as an individual who loves to study the **sociology** of our **profession**, and as an individual who looks to the **future** of our **profession**...
- We need to do more.
- We need to DIVE DEEPER into our BOK!

*2014 National Education Seminar*

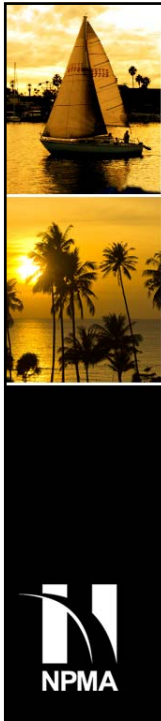


## So, let's take a look at the issues surrounding a task analysis

- Please understand my forte is DoD Property management.
- Therefore, my focus in this presentation is to take one competency and create an exploded BOM.

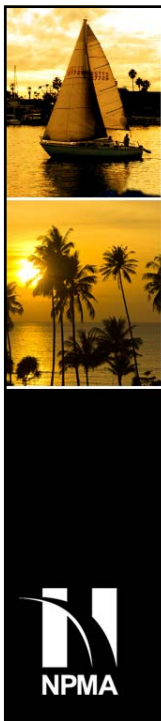


*2014 National Education Seminar*



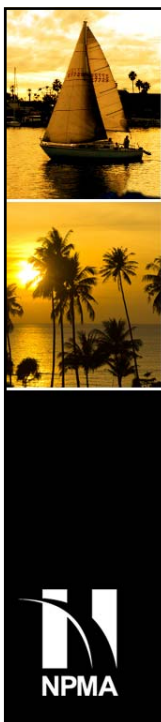
**Let me give  
you an example of a  
“DEEP DIVE”  
into the BOK  
for a single  
competency.**

*2014 National Education Seminar*



**One Competency –  
What is needed to:  
“PERFORM A PROPERTY  
MANAGEMENT SYSTEM  
ANALYSIS”**

*2014 National Education Seminar*




# “PERFORM A PMSA”

## FOUNDATIONAL KNOWLEDGE OF GOVERNMENT PROPERTY

- All of the **TECHNICAL MATERIAL RELATED TO GOVERNMENT PROPERTY IN THE POSSESSION OF CONTRACTORS**
  - All of the **Classes** of GP
  - All of the **Clauses**
  - All of the **Policy Statements and Requirements**
    - Federal Acquisition Regulations (FAR)
    - Agency Supplements, e.g., DFARS
    - Agency Guidance, i.e., Regulations, Instructions, Manuals, PGIs, etc.

*2014 National Education Seminar*



# “PERFORM A PMSA”

- So – what does it take to acquire the knowledge, skills and abilities to have the **COMPETENCE** to “PERFORM?”
  - KNOWLEDGE
  - COMPREHENSION
  - APPLICATION

BLOOM'S TAXONOMY

FOUNDATIONAL KNOWLEDGE OF GOVERNMENT PROPERTY

All of the TECHNICAL MATERIAL RELATED TO GOVERNMENT PROPERTY IN THE POSSESSION OF CONTRACTORS

All of the Classes of GP

All of the Clauses

All of the Policy Statements and Requirements




Federal Acquisition Regulations (FAR)

Agency Supplements

Agency Guidance, i.e., Regulations, Instructions and Manuals

*2014 National Education Seminar*






# “PERFORM A PMSA”

Knowledge of  
Common Business Practices:  
Acquisition,  
Records,  
Physical Inventories,  
Storage,  
Movement,  
Maintenance,  
Disposition,  
etc.

**You get the IDEA!**

EXTENSIVE LITERATURE  
For each and every one of  
these topics **PLUS:**  
INDUSTRY LEADING PRACTICES  
CUSTOMARY COMMERCIAL PRACTICES  
AND EVEN  
VOLUNTARY CONSENSUS STANDARDS

*2014 National Education Seminar*

# “PERFORM A PMSA”



Wait a minute Doug ... all of **THOSE**  
topics have a body of knowledge so,  
for each topic you would need to  
acquire the **KNOWLEDGE, SKILLS  
AND ABILITIES** in **THAT** topical Area!!!

**YUP!**

And at what level of Bloom’s  
Taxonomy?

- Knowledge
- Comprehension
- Application... and maybe even  
higher!?!?!

*2014 National Education Seminar*

# “PERFORM A PMSA”

Each of these processes have their own "Body of Knowledge" that would need to be "shredded."




Knowledge of Common Business Practices:  
Acquisition,  
Records,  
Physical Inventories,  
Storage,  
Movement,  
Maintenance,  
Disposition,  
etc.  
You get the IDEA!

FOUNDATION KNOWLEDGE OF GOVERNMENT PROPERTY

All of the TECHNICAL MATERIAL  
RELATED TO GOVERNMENT PROPERTY  
IN THE POSSESSION OF CONTRACTORS

All of the Clauses  
All of the Policy Statements and Requirements  
Federal Acquisition Regulations (FAR)  
Agency Supplements  
Agency Guidance, i.e., Regulations, Instructions and Manuals


2014 National Education Seminar


# “PERFORM A PMSA”


## AUDITING CONCEPTS AND PRINCIPLES

- **Generally Accepted Auditing Standards (GAAS)**
- **Generally Accepted Government Auditing Standards (GAGAS)**
- **Statistical Applications**
- **Populations, Population Definition**
- **Sampling Methodologies**
- **Sample Evaluation**



2014 National Education Seminar





# “PERFORM A PMSA”

**AUDITING CONCEPTS AND PRINCIPLES**

Generally Accepted Auditing Standards (GAAS)  
 Generally Accepted Government Auditing Standards (GAGAS)  
 Statistical Applications  
 Populations, Populations Definition  
 Sampling Methodologies  
 Sample Evaluation


Knowledge of Common Business Practices:  
 Acquisition,  
 Records,  
 Physical Inventories,  
 Storage,  
 Movement,  
 Maintenance,  
 Disposition,  
 etc.  
 You get the IDEA!

Each of these processes have their own "Body of Knowledge" that would need to be "shredded."

**FOUNDATION KNOWLEDGE OF GOVERNMENT PROPERTY**

All of the TECHNICAL MATERIAL  
 RELATED TO GOVERNMENT PROPERTY  
 IN THE POSSESSION OF CONTRACTORS  
 All of the Clauses  
 All of the Policy Statements and Requirements  
 Federal Acquisition Regulations (FAR)  
 Agency Supplements  
 Agency Guidance, i.e., Regulations, Instructions and Manuals

2014 National Education Seminar




# “PERFORM A PMSA”

- Ancillary “Hard” and “Soft” Skills:
  - Interviewing Skills
  - Observational Skills (Qualitative)
  - Mathematical Skills (Quantitative)
  - Analytical Skills
  - Simple English
  - Report Writing
  - Conducting Meetings

**Do we ASSUME  
 Everyone has those  
 Skills?  
 How do YOU  
 Acquire those skills?**

2014 National Education Seminar



# “PERFORM A PMSA”

**AUDITING CONCEPTS AND PRINCIPLES**

Generally Accepted Auditing Standards (GAAS)  
Generally Accepted Government Auditing Standards (GAGAS)  
Statistical Applications  
Populations, Populations Definition  
Sampling Methodologies  
Sample Evaluation

OMG!!!


Each of these processes have their own “Body of Knowledge” that would need to be “shredded.”

Knowledge of Common Business Practices:  
Acquisition,  
Records,  
Physical Inventories,  
Storage,  
Movement,  
Maintenance,  
Disposition,  
etc.  
**You get the IDEA!**


**Ancillary “Hard” and “Soft” Skills:**  
Interviewing Skills  
Observational Skills  
Mathematical Skills  
Analytical Skills  
Simple English  
Report Writing  
Conducting Meetings  
Etc.

**FOUNDATION KNOWLEDGE OF GOVERNMENT PROPERTY**

All of the TECHNICAL MATERIAL RELATED TO GOVERNMENT PROPERTY IN THE POSSESSION OF CONTRACTORS  
All of the Clauses  
All of the Policy Statements and Requirements  
Federal Acquisition Regulations (FAR)  
Agency Supplements  
Agency Guidance, i.e., Regulations, Instructions and Manuals




2014 National Education Seminar

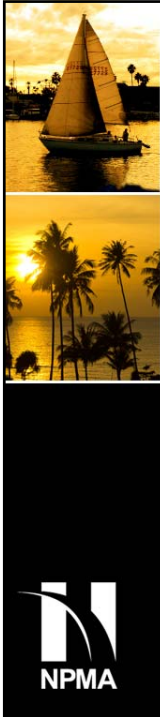


# “PERFORM A PMSA”

- **A TRADITIONAL COLLEGE CURRICULUM COULD SPEND MULTIPLE SEMESTERS COVERING ALL OF THIS MATERIAL... AND THIS WAS ONLY ONE COMPETENCY!**
- **Yes, A BIG COMPETENCY – but a single competency none the less.**
- **AND, IT IS NOT A VERY “DEEP DIVE” ANALYSIS!!!**




2014 National Education Seminar

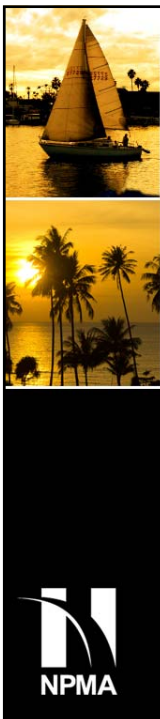


## MY WAY OF LEARNING!

- **Now, if this NES was held near my home – I could have brought at least a hundred books covering these topics.**
  - Diverse
  - Varied
  - Various Levels of Detail
  - So, how does one acquire all of this information?






*2014 National Education Seminar*



## BUT, HOW DO YOU LEARN?

- **FORMAL CLASSROOM?**
- **LECTURE?**
- **THEORIES AND FACTS?**
- **INFORMAL LEARNING?**
- **ON-LINE?**
- **TECHNICAL versus INTERPERSONAL?**
- **READING BOOKS?**
- **OBSERVATIONAL LEARNING?**
- **EXPERIENTIAL LEARNING?**
- **MENTOR?**

*2014 National Education Seminar*



**BUT, HOW DO YOU LEARN?**

- **AND THEN HOW DO WE AFFORD THE OPPORTUNITY FOR ALL TO LEARN BASED UPON THEIR LEARNING STYLE?**




*2014 National Education Seminar*



**O.K.,  
BUT NOW  
I AM RAMBLING!**



*2014 National Education Seminar*



**FUTURE FOR PROPERTY AND  
ASSET MANAGEMENT**

This presentation was NOT meant  
as a criticism!!!

It was meant as an

**Encouragement** and a

**Challenge**

*2014 National Education Seminar*



**FUTURE FOR PROPERTY AND  
ASSET MANAGEMENT**

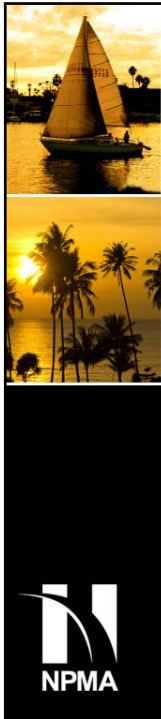
An **Encouragement**

As we have a GREAT jump on a BOK,  
and a

**Challenge**

To continue to create a more  
detailed BOK!

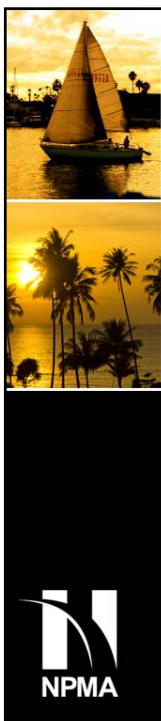
*2014 National Education Seminar*

The left side of the slide features a vertical stack of three images. The top image shows a sailboat on the water at sunset. The middle image shows palm trees silhouetted against a sunset sky. The bottom image is the NPMA logo, which consists of a stylized 'N' and 'M' above the letters 'NPMA'.

## AN ENCOURAGEMENT

- We, as an association and as a profession have made enormous strides in our current BOK
  - Rewrite of the Manuals
  - Certification
  - Publications

*2014 National Education Seminar*




The left side of the slide features a vertical stack of three images. The top image shows a sailboat on the water at sunset. The middle image shows palm trees silhouetted against a sunset sky. The bottom image is the NPMA logo, which consists of a stylized 'N' and 'M' above the letters 'NPMA'.

## AN ENCOURAGEMENT

- We, as an association and as a profession have made enormous strides in our sharing of that knowledge
  - The Creation of the dozens of Voluntary Consensus Standards
  - including ISO 55000/1/2!

*2014 National Education Seminar*





## A CHALLENGE

- **We, as an association and as a profession need to CONTINUE to grow our BOK by:**
  - **WRITING MATERIALS!**
    - Note – if is ain't written down it doesn't exist!
  - **RESEARCHING**
    - No longer is an opinion good enough. We now must have **SOLID, DEFENDABLE EMPIRICAL EVIDENCE!**
  - **COLLECTING and RETAINING**
    - Obtaining the knowledge from our "Senior" professionals!
      - Example: 25<sup>th</sup> Anniversary Past Presidents

*2014 National Education Seminar*



## AND THE BIG CHALLENGE

**CONVENE A GROUP OF VOLUNTEERS AND THROUGH A DEFINED PROCESS EXPAND OUR BOK (And its underlying competencies) FOR US TO USE AS OUR ROADMAP AND TEMPLATE TO FURTHER ENHANCE OUR BOK!**



*2014 National Education Seminar*



# THANK YOU!

**Dr. Douglas N. Goetz,  
A brand new Grandpa,  
CPPM, CF**

**PRESIDENT, GP CONSULTANTS  
PO Box 340425  
Beavercreek, OH 45324**

**[GPCONSULTANTS@ATT.NET](mailto:GPCONSULTANTS@ATT.NET)  
[WWW.GOVERNMENT-PROPERTY.COM](http://WWW.GOVERNMENT-PROPERTY.COM)**

**1-937-306-8374**



*2014 National Education Seminar*