

# Contract Quality Lessons Learned

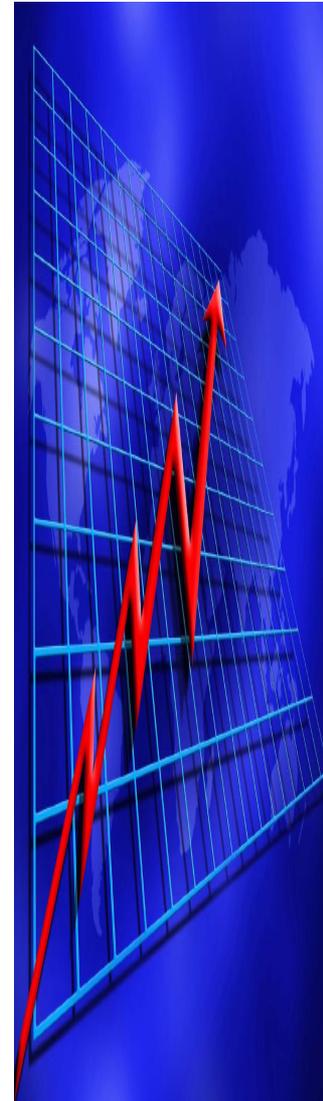
# 6σ

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Contract Quality Team Lead

# Contract Quality Lean Six

- The Contract Quality Lean Six Sigma project originated out of problems that were occurring with the DFAS Columbus payment process with the initiation of Navy ERP.
- Initially the team focused on payments made by MOCAS for the Navy, but eventually expanded to include other Services and the entire entitlement process.
- The team utilized the principles of lean six and reviewed data related to payment issues from a wide variety of sources, including Prompt Payment Act interest penalties, Contract Deficiency Reports, Transaction Rejects, Pre-validation, and Contract Reconciliation. Root cause analysis revealed a common set of causes to many of the payment problems and lead to a set of solutions.
- Many of the solutions have been implemented or are in the process of being implemented. This documents some of the lessons learned relative to the experience with Navy ERP and subsequent ERP implementations and problems of process or procedure in the P2P process where training and understanding could significantly improve the process.



# Topics

- What Works
  - Electronic Business
  - Barriers to Electronic Business
- What Hasn't Worked
  - ERP Implementation
    - Data Migration
    - Business Rules
  - Errors in Contract Construction
    - Contract Line Items
    - InfoSLINs & Payment Instructions
    - ACRNs & Lines of Accounting
    - Exhibits and Exhibit Line Items (ELINs)
    - Delivery & Acceptance
- Managing Complexity



# What Works

- Electronic Commerce – where electronic commerce was used, whether through WAWF invoices or acceptances, the electronic transmission of contract documents or electronic pre-validation, business results were consistently better
  - No input errors
  - No backlog
  - Reduced reject rates
  - Reduced interest penalties
  - Reduced reconciliation costs
- While the more of the process that was electronic the better the results, electronic process did not have to be perfect to generate substantial improvements.



# Less than perfect

Time and motion studies were done to determine the impact of electronic transmission of contracts on DFAS input of contract documents:

- **Manual input** **23 minutes**
- **Successful Electronic** **0 minutes**
- **Failed Electronic** **1 minute 23 seconds**

Failed electronic transactions usually only require the correction of a single data element. **Over 94 % of the benefit** of electronic transmission is received **even with a failed electronic transaction.**

Note: Even with successful electronic processing resources need to be continually allocated to perform quality assurance validations.  
(The time calculations above are MOCAS specific.)

# Solution and Success

The largest non-electronic trading partner at the time of the effort was the Standard Procurement System (SPS) used by all the Services and Defense Agencies

A solution for sending contracts as standard EDI transactions was developed using the existing SPS adapter and data maps at the GEX

This resulted in a solution that was inexpensive, required no additional deployment by the components and was **successfully implemented by all the Services in 2009 & 2010.**

The solution also provides electronic contracts as data to EDA allowing **pre-population of invoices** in WAWF (effective July 2011) and a solution that will allow for the **elimination of more than 250 point to point interfaces** between Service SPS sites and DFAS vendor pay entitlement systems.



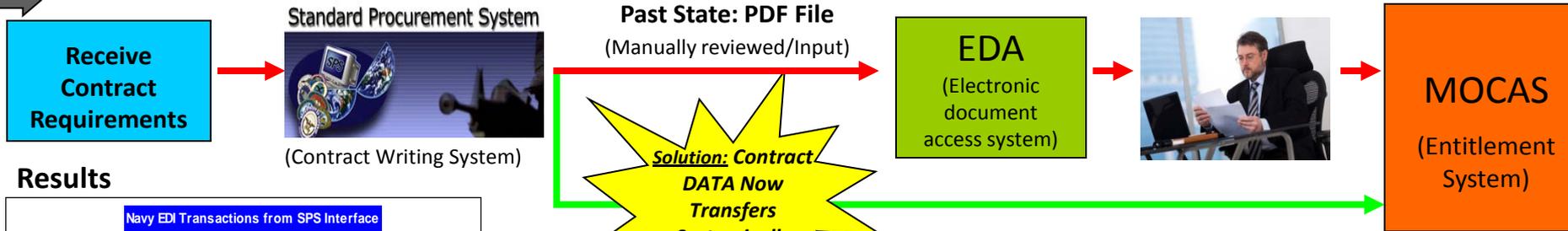
# Procure to Pay



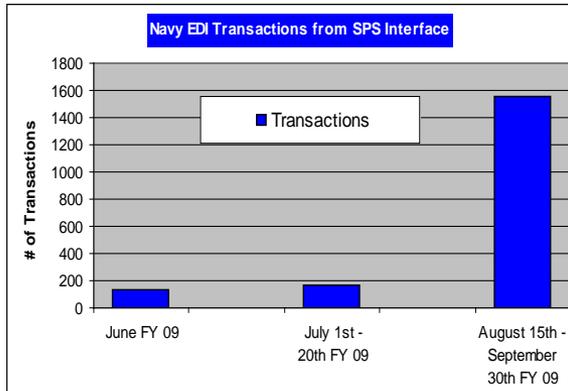
## Problem

Manual Processing of Contracts from the writing to the entitlement system were causing significant manual intervention and rework to process the contract

## Showcased Solution - SPS Interfaces (Overview)



## Results



## Benefits

- ↓ Labor Cost
- ↓ Customer Bills
- ↑ Timeliness
- ↑ Quality & Accuracy

Initial Beneficiaries:



## Additional Solutions

- Electronic ELIN Acceptance
- Special Payment Instructions
- Contracting Officer EDA Registration
- MOCAS LOA Mapping



# Hindrances to E-Business

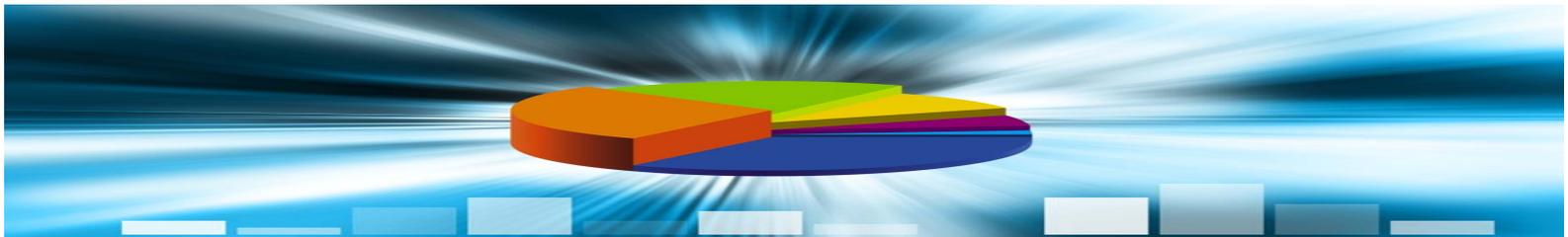
- Problem: Exceptions in regulations to the use of WAWF
- Solution: Revisited regulatory exceptions and initiated DFARS change
  
- Problem: Providing contract documents in non-data formats (See chart 25)
- Solution: Initiated DFARS change to eliminate non-data loop holes.
  
- Problem: Failure to implement Electronic Business process in ERPs (See chart 10)
- Solution: Publish “Lessons Learned”
  
- Problem: Incorrect Contract Construction
- Solution: Develop monitoring capabilities  
Publish metrics  
Provide “Lessons Learned”  
Develop and deliver training



# ERP Implementation

Data Migration – issues in data migration have occurred in every ERP data implementation.

- Data in the ERP is more granular than the legacy data
- ERP implementation changed data, but did not share those changes with trading partners
- Data is migrated into the ERP manually
- Data may be changed to accommodate ERP



# ERP Implementation

Business Rules – implementation of business rules in ERPs do not always support regulatory and statutory contracting and invoicing requirements

- Receipt is not a regulatory requirement for payment, but may be in the ERP
- ERP may not consider source acceptance
- ERP may not consider financing payments
- Workarounds for processes not native to ERPs
- Automated processes (contract input, pre-validation) may convert to manual



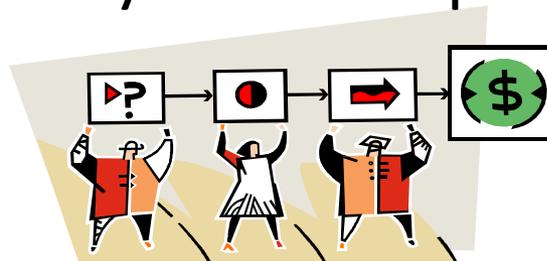
# ERP Implementation

## Solution:

When implementing an ERP anticipate that there may be data or business process issues when implementing. Process may match what the ERP anticipated, but not support trading partners.

Notify trading partners of planned changes to data structure, interfaces and business processes.

Test with trading partners. Discovering issues when in production is costly and disruptive.



# Focus on the Contract

## DCMA and DFAS Actions Driven by the Contract

- Contract Oversight
- Contractor Payment
- Saving Canceling Funds
- Contract Closeout

## Vendor Actions Driven by the Contract

- Production
- Delivery
- Shipment
- Invoicing

## Our Success is Influenced by Contract:

- Data
- Structure
- Content



# Contracts

Across all the data sampled a few areas of contract construction appeared as common root causes:

- Contract Line Items
- ACRNs
- InfoSLINs and Payment Instructions
- ELINs and Attachments
- Managing Complexity



# Contracts Line Items

Basic rules of Contract Line Item Construction were not being followed:

- Contracts may contain Contract Line Items (CLINs), Subline Items (SLINs) and Exhibit Line Items (ELINs). Prices, Delivery, Invoicing for any deliverable should be at only one level.
- We found:
  - Priced CLINs with Priced SLINs
  - Priced SLINs with priced ELINs
  - Priced CLINs with funded InfoSLINs and priced ELINs

# Contract Line Items

Unit of Measure & Quantities – Unit and Measure and quantity are intended to reflect what is being purchased, delivered to and accepted by the Government. Many contracts varied from this to accommodate financial systems:

CLIN	Description	Qty	UoM	Unit Price	Amount
0001	Cost Reimbursable services	176,000	Dollar	\$1	\$176,000
0002	4 licenses (fixed price)	120,000	each	\$1	\$120,000

# Contract Line Items

- Solutions:
  - Contract Deficiency Reports
  - Provide electronic measures and scorecards for common problems
  - Training
    - At DAU
    - DPAP Procurement Conference
    - DPAP EBusiness Conference
    - Targeted to sites based on CDRs and scorecards

Tips for

Line items

# Contract Line Items

- Keep it Clear and Simple
- Only subdivide CLINs for a single reason
  - Multiple subline breakouts make bizarre contracts
  - Consider separate CLINs for other breakouts
- Check examples in DFARS 204.7104-2
- Consult service/agency guides
- Defense Acquisition University
  - <https://learn.dau.mil/html/clc/Clc.jsp>
  - Course: Structuring Contracts for the Emerging DoD Environment (CLC033)

# ACRNs

Basic rules for ACRN construction are not being followed:

- Multiple ACRNs with the same Line of Accounting
- Duplicate ACRNs with different Lines of Accounting

SUBCLIN 0002AT:

Funding is authorized as follows:

ACRN: AT

Acctng Data: 9790400 1202189 J01 606051 600008 59233 65126J 667100 FSR: 037441 PSR: E07381 DSR: 232419 F67100

CIN: 00000000000000000000000000000000

Add: \$8,736.

SUBCLIN 0002AT

Funding on SUBCLIN 0002AT is initiated as follows:

ACRN: AT

CIN: 00000000000000000000000000000000

Acctng Data: 9780400 1202188 J01 606051 600008 59233 65126J 667100

Increase: \$16,464

Total: \$16,464



P00015

P00007

# ACRNs

- Solutions:
  - Contract Deficiency Reports
  - Provide electronic measures and scorecards for common problems
  - Training
    - At DAU
    - DPAP Procurement Conference
    - DPAP Ebusiness Conference
    - Targeted to sites based on CDRs and scorecards

# InfoSLINs & Payment Instructions

When a contract line item is funded with more than one ACRN and the work is non-severable:

- InfoSLINs will be used to identify the funding and;
- Special Payment Instructions will be provided to indicate how payments should be allocated to the ACRNs

Problems:

- InfoSLINs assigned incorrectly
- Special Payment Instructions provided as text forcing manual processing
- Special Payment Instructions omitted

# InfoSLINs & Payment Instructions

Problem: InfoSLINs are not assigned correctly

- Line Items with one infoSLIN and one ACRN
- InfoSLINs and deliverable (alpha) SLINs on the same line item
- Priced InfoSLINs

Solutions:

- Provide training on correct construction
- Provide edits in contract writing tools to prevent common errors
- Create checks and reports

<https://dfas4dod.dfas.mil/cps/contractingofficers/>

# InfoSLINs & Payment Instructions

	<b>CLINS (ex. 0001)</b>	<b>Sub CLINs (ex. 0001AA)</b>	<b>Info SLINs (ex. 000101)</b>
<b>Can be funded by...</b>	<ul style="list-style-type: none"> <li>• multiple ACRNs</li> </ul>	<ul style="list-style-type: none"> <li>• funding on subCLIN</li> </ul>	<ul style="list-style-type: none"> <li>• funding on SLIN</li> </ul>
<b>Can...</b>	<ul style="list-style-type: none"> <li>• use Sub CLINs to establish ACRNs for severable quantities associated with a single accounting classification,</li> <li><u>OR</u></li> <li>• use Info SLINs to establish ACRNs for each accounting classification citation on a non-severable item</li> </ul>	<ul style="list-style-type: none"> <li>• be used to establish funding ACRNs for severable CLINs</li> </ul>	<ul style="list-style-type: none"> <li>• be used to establish funding ACRNs for non-severable CLINs</li> </ul>
<b>Cannot...</b>	<ul style="list-style-type: none"> <li>• use both Sub and Info CLINs to establish funding</li> <li>• be used to fund another CLIN</li> </ul>	<ul style="list-style-type: none"> <li>• be used in conjunction with Info SLINs to establish funding ACRNs for CLINs</li> <li>• be funded by more than one ACRN</li> <li>• be funded by an Info SLIN</li> </ul>	<ul style="list-style-type: none"> <li>• be used in conjunction with Sub CLINs to establish funding ACRNs for CLINs</li> <li>• be used to fund a Sub CLIN</li> <li>• be used for more than one unique accounting classification</li> </ul>

# InfoSLINs & Payment Instructions

Problem: Payment instructions are included in contracts as text. This forces manual processing by DFAS which results in higher billing rates and creates opportunities for errors

Solution: Modify DFARS to include a standard set of payment instructions using clause like identification to enable them to be identified and implemented automatically.

- PGI modified 204.7108 September 2009
- MOCAS first system modified to accept and implement automated payment instructions Feb 2011

# Payment Instructions

DFARS PGI 204.7108

- **DFARS PGI 204.7108**

- The contracting officer shall insert numbered instructions in Section G in a manner that reflects the performance of the work on the contract
- When incorporating clauses by reference in Section G, cite the clause number, title, and date
- If additional accounting classification citations are added, the payment instructions must be modified
- Contracting Officers shall not issue modifications that would create retroactive changes to payment instructions
- All payment instruction changes shall be effective as of the date of the modification

**DATA INSTEAD OF TEXT!**

# ELINs

Exhibit Line Items (ELINs) can be used as convenient way to display large numbers of items in a contract or modification

Problem: Exhibits are sent as attachments to contract documents as scanned images, excel spreadsheets and word documents and not as part of the data set that is the contract. This forces DFAS (and all other consumers of the documents) to process manually with the higher cost and associated errors.

# ELINs

- Solution: Send ELINs as part of the data of the contract document.
  - Solution available in current contract writing systems.
  - Consistent with PGI requirements to send contract documents as data



# P2P Success with ELINs

- P2P Success with ELINs

- Pass as data fields in lieu of images

- Automates the process
- Eliminates significant delays, reduces rework, and lowers costs previously rising from manual contract input, pre-validation, and disbursement posting

- Since September 2009, the Navy, as the first Military Department to use this solution, successfully began transmitting electronically contracts containing ELINS to the entitlement and accounting systems

- Overall baseline figures indicate the ELIN solution will impact approximately 17,000 contracts and 400,000 ELINs

- Rework rising from the manual contract load, obligation validation and disbursement posting is steadily declining

# ELINs

Impediments to success: DFARS contains language allowing ELINs to be **provided on attachments** conflicting with PGI electronic distribution requirements



DFARS change in process to eliminate loopholes to electronic distribution

# Managing Complexity

Observation: Many different elements of contract structure contribute to the complexity of the contract;

- Mixed type contracts
- Contract Financing
- Multi funded line items
- Multi Service Funding
- Options
- Volume and frequency of modifications

Contracts with one of the above **rarely** exhibit problems. Contracts with many of the above **usually** have high interest, prevalidation issues, and high charges for contract reconciliation.

Less than 0.02% of contracts account for 33% of Prompt Payment Act interest penalties

# Managing Complexity

Up-front effort in the construction of the contract will pay substantial dividends, avoiding payment problems, reconciliation, and supporting the ultimate closeout of the contract.

- Well thought out Line Item and ACRN structure
- Use of continued contracts for options  
DFARS 204.7001(c)
- Send contract documents as data
- Seek advice from DFAS or DPAP



# Conclusion

- The Contract Quality Lean Six identified solutions to many of the problems that impact payment of contracts and drive administrative costs for the department.
- Solutions implemented so far have:
  - Reduced PPA Interest penalties by 40% in one year
  - Reduced contract reconciliation costs by 23%
  - Cut cycle time of contract and mod input by 50%
  - Cut DFAS billing rates for MOCAS by 12.5% and increased invoices receiving the lowest electronic processing rate
- Additional efficiencies are available by completing the recommendations and exporting these lessons learned across all contracting , entitlement and finance and by standardizing the automation solutions that have been implemented.



INNOVATION  
SUCCESS  
EVALUATION  
DEVELOPMENT  
GROWTH  
SOLUTION  
PROGRESS  
MARKETING

# Lean Six Participants

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