

Six Sigma DMAIC Improvement Story

Project Objective: To Reduce the Time to Pay Vendors for Goods and Services

Last Updated: 12-5-2017

Team: Melissa Belmonte, Monique Caliste, Josephine Barrios, Lucille Benjamin, Patrice Sykes, Bill Busutil, Amy Horton-Tavera, Jose Espinoza, and Roy Ferreira

Frances Morris (Sponsor) Jennifer Moon (Executive Sponsor)

Identify Project Charter

The team developed a Project Charter.

| | Project Charter | | | | | | | | | | |
|------------------|-------------------------|---|--|--|--|--|--|--|--|--|--|
| | Project Name: | Reduce the time it takes for WASD to pay vendors. | | | | | | | | | |
| Business Case | Problem/Impact: | As of January 2017, 76% of WASD's invoices for most of its goods and services were paid within 30 days and 73% of invoices submitted by "small businesses" were paid within 14 days. Late payments to vendors could place the department in non-compliance with County ordinances and policies, and dissuade desirable vendors from providing goods and services to WASD. | | | | | | | | | |
| | Expected Benefits: | Consistent reductions in the time it takes to pay vendors will ensure compliance with County ordinances and policies, and enable WASD to better retain desirable vendors. | | | | | | | | | |
| Objectives | Ctives | | | | | | | | | | |
| | Time Frame: | January through August 2017 | | | | | | | | | |
| | Strategic Alignment: | Supports the County's Business Plan | | | | | | | | | |
| Scope | In Scope: | All vendor payments within WASD | | | | | | | | | |
| ocope | Out-of-Scope: | All other vendor payments | | | | | | | | | |
| | Authorized by: | Jennifer Moon, Lester Sola | | | | | | | | | |
| Method | Project Methodology: | Lean Six Sigma DMAIC (Define - Measure - Analyze - Improve - Control); observations & interviews | | | | | | | | | |
| | Sponsors: | Jennifer Moon, Frances Morris | | | | | | | | | |
| | Team Leader: | Amy Horton-Tavera | | | | | | | | | |
| Team | Team Members: | Amy Horton-Tavera, Roy Ferreira, Bill Busutil, Jose Espinoza, Josephine Barrios, Melissa Belmonte, Lucille Benjamin, Monique Caliste, Patrice Sykes | | | | | | | | | |
| | Process Owner(s): | Frances Morris | | | | | | | | | |
| | Mgmt Review Team: | Jennifer Moon, Hugo Salazar, Lester Sola, Frances Morris | | | | | | | | | |
| Schedule | Completion Date: | 31-Aug-2017 | | | | | | | | | |
| | Review Dates: | Monthly, and Final Review on August 28, 2017 | | | | | | | | | |

Define Measure Analyze Improve Control



2

Develop Project Timeline

The team developed a schedule to complete the Project.

| | WHAT: Complete DMAIC Process by August 30th, 2017 | | | | | | | | |
|----|---|-----|-----|-----|--|------------------------------|------|------|--------|
| | DMAIC Story Process Step | Jan | Feb | Mar | | IEN ⁰¹⁷ May | June | July | August |
| 1. | Define | | | | | | | | |
| 2. | Measure | | | | | | | | |
| 3. | Analyze | | | | | | | | |
| 4. | Improve | | | | | | | | |
| 5. | Control | | | | | | | | |

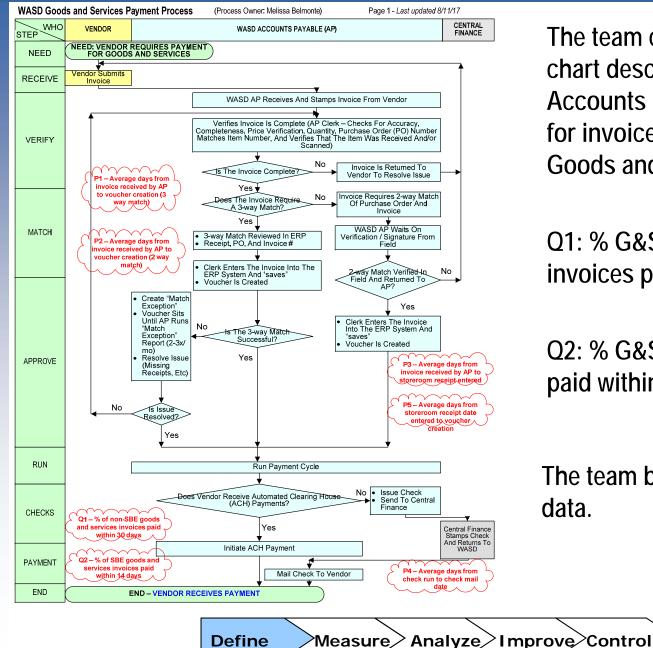
Next, the team graphically illustrated the payment process.

Define Measure Analyze Improve Control



3

Review Process Flowchart



The team constructed a flow chart describing the WASD Accounts Payable process for invoices related to Goods and Services (G&S).

Q1: % G&S <u>Non-SBE</u> invoices paid within 30 days

Q2: % G&S <u>SBE</u> invoices paid within 14 days

The team began to gather data.



Identify Data Collection Needs

The team developed a data collection spreadsheet and reviewed invoice information from October 2016 through December 2016, each row is a *paid invoice*.

| Voucher ID 🔽 | | Invoice Rcpt Date 💌 | Amount 🔻 | Vendor ID 🔻 | Voucher Line Descr | PO # 🔻 | | Payment Date ▼ | Vendor Name |
|--------------|------------|------------------------|----------|-------------|--------------------------------|------------|------------|-------------------|----------------------------|
| 00828806 | 259046 | 10/1/2016 | \$102.81 | 0000002451 | | 0000222131 | 9/13/2016 | | GRAINGER |
| 00828928 | 232305 | 10/1/2016 | | 0000016533 | SAFEYT SHOES FOR LEONARD ROBI | | 12/9/2016 | 1 | INTERNATIONAL FOOTWEAR INC |
| 00834515 | 13115270 | 10/25/2016 | \$138.74 | 0000016533 | SAFETY SHOES FOR CARLOS PEREZ | _ | 12/9/2016 | 12/21/2016 | INTERNATIONAL FOOTWEAR IN |
| 00836715 | 13120064 | 10/25/2016 | \$148.56 | 0000015623 | FLUID, OPEN AND SHUT PENETRANT | 0000225355 | 11/16/2016 | 12/6/2016 | LAWSON PRODUCTS INC |
| 00828532 | 207002 | 6/1/2016 | \$70.44 | 0000003689 | air filter part # 6744 napa in | 0000223631 | 10/13/2016 | 11/23/2016 | NAPA AUTO PARTS |
| 00829349 | 016095 | 10/1/2016 | \$12.40 | 0000003689 | 220560 SPINDLE WASHER | 0000223425 | 10/11/2016 | 11/28/2016 | NAPA AUTO PARTS |
| 00828488 | 240764 | 6/1/2016 | \$81.00 | 0000003689 | 7236 CORE DEPOSIT | 0000216095 | 5/23/2016 | 11/28/2016 | NAPA AUTO PARTS |
| 00828806 | 259046 | 10/1/2016 | \$189.00 | 0000003689 | 7237 CORE DEPOSIT | 0000213002 | 3/28/2016 | 10/3/2016 | NAPA AUTO PARTS |
| 00834488 | 12901208 | 9/21/2016 | \$34.28 | 0000003689 | 7624 HYD FILTER | 0000216270 | 5/25/2016 | 11/21/2016 | NAPA AUTO PARTS |
| 00834480 | 12899709 | 9/21/2016 | \$66.60 | 0000003689 | 4886924 FRONT BRAKE ROTOR | 0000215926 | 5/19/2016 | 11/21/2016 | NAPA AUTO PARTS |
| 00834507 | 13115255 | 10/25/2016 | \$182.00 | 0000003689 | G31124-0606 COUPLING | 0000223860 | 10/17/2016 | 11/28/2016 | NAPA AUTO PARTS |
| 00823625 | 9229902250 | 9/26/2016 | \$318.99 | 0000003689 | 22082168 12K HUB | 0000223425 | 10/11/2016 | 11/28/2016 | NAPA AUTO PARTS |
| 00834481 | 12899726 | 9/21/2016 | \$133.20 | 0000003689 | FLUID, DIESEL EXHAUST (DEF), V | 0000222034 | 9/12/2016 | 11/28/2016 | NAPA AUTO PARTS |
| 00836706 | 13119195 | 10/25/2016 | \$61.50 | 0000003689 | | 0000222855 | 9/26/2016 | 11/23/2016 | NAPA AUTO PARTS |
| 00836702 | 13119190 | 10/25/2016 | \$1.78 | 000003689 | DC # 10-0082 needs a a/c orifi | 0000222915 | 9/26/2016 | 11/23/2016 | NAPA AUTO PARTS |
| 00834512 | 13115268 | 10/25/2016 | \$220.16 | 0000017944 | COPIER RENTAL PAYMENT | 0000224470 | 10/28/2016 | 12/15/2016 | TOSHIBA AMERICA BUSINESS S |
| 00834484 | 12900971 | 9/21/2016 | | 0000017944 | | 0000225457 | 11/17/2016 | 12/28/2016 | TOSHIBA AMERICA BUSINESS S |
| 00834481 | 12899726 | 9/21/2016 | \$102.13 | 0000017944 | TOSHIBA COPIER RENTAL PAYMENT | 0000225461 | 11/17/2016 | 12/28/2016 | TOSHIBA AMERICA BUSINESS S |
| 00836613 | 13148738 | 10/18/2016 | \$223.47 | 0000017944 | TOSHIBA COPIER RENTAL PAYMENT | - | 11/17/2016 | 12/28/2016 | TOSHIBA AMERICA BUSINESS S |
| 00834501 | 12900381 | 9/21/2016 | | 0000017944 | | 0000224470 | 10/28/2016 | | TOSHIBA AMERICA BUSINESS S |
| 00828535 | 206999 | 6/1/2016 | • | 0000017944 | | 0000225457 | 11/17/2016 | | TOSHIBA AMERICA BUSINESS S |
| 00823627 | 9229902243 | 9/26/2016 | \$469.98 | 0000017944 | | 0000216672 | 6/1/2016 | 12/28/2016 | TOSHIBA AMERICA BUSINESS S |
| 00828537 | 206998 | 6/1/2016 | \$220.16 | 0000017944 | COPIER RENTAL PAYMENT | 0000224470 | 10/28/2016 | 12/15/2016 | TOSHIBA AMERICA BUSINESS S |

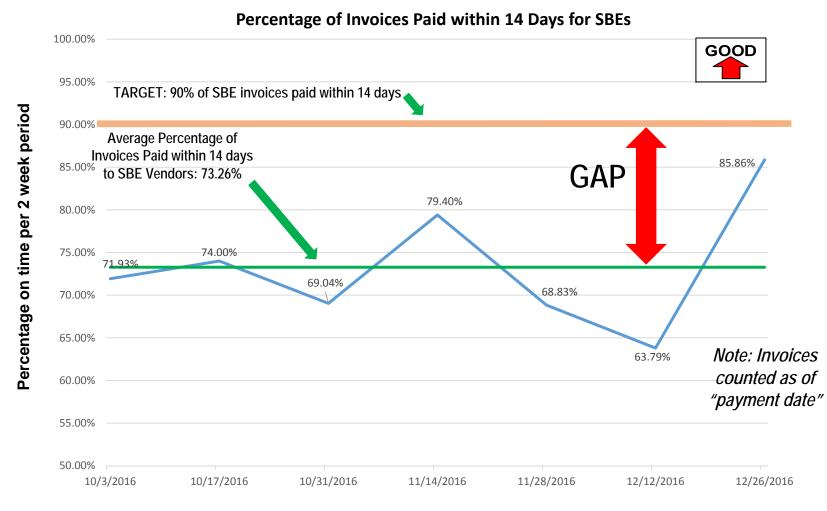
Next, the team examined outcome indicator data.

Define Measure Analyze Improve Control



Review Selected Indicator

The team collected sample outcome indicator data from October 2016 through December 2016 related to <u>Small Business Enterprises (SBE)</u> and reviewed performance trends:



The team looked closer at invoices paid from October to December 2016

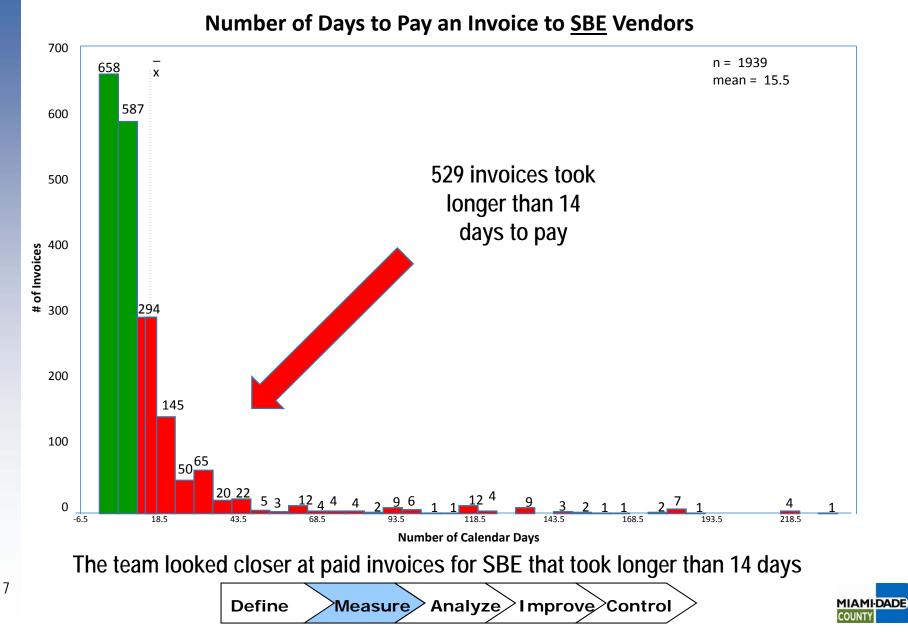
Define Measure Analyze Improve Control



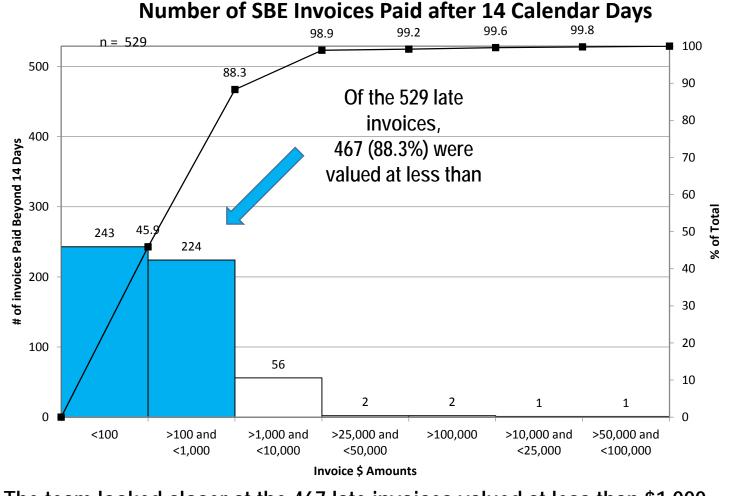
6

Review Selected Indicator

The team looked at paid <u>SBE</u> invoices data from October 2016 through December 2016.



The team stratified the sample of <u>SBE</u> invoices that took longer than 14 days to pay, by the amount of the invoice, and found:



The team looked closer at the 467 late invoices valued at less than \$1,000



Define Measure Analyze Improve Control

The team further stratified the sample of <u>SBE</u> invoices that took longer than 14 days to pay and were valued at <\$1,000, by invoice type, and found:

96.8 97.2 97.6 98.1 98.5 98.9 99.4 99.6 99.8 79.9 82.9 85.2 87.4 89.5 91.6 76.2 -100 450 n = 467 90 400 80 332 late SBE invoices 71.1 350 70 valued at <\$1,000 were 300 60 for 4 distinct types of requency of Total 250 50 services Exterminator Services 39 200 % 40 M & S (Inventory items) 150 30 Clothing and Uniforms 93 92 87 100 20 60 Motor Vehicle Maintenance 50 10 -24 17 14 11 10 10 10 5 2 1 1 1 n 0 other General & Administrative dothing & Uniforms Budget Onl Other Construct Mat & Supplies other Outside Contractual Sucs Clathing and Uniforms tlectrical fixtures a supplies Software Maintenance Miscellaneous chemicals Safeth Protective Clothine NISC OTHER OPERATIVE SUPPLIES Outside Consultant Network Hardwarelcabe Maintenance Electronic Parts/Pumps/Motors ExpendableTools Cleaning Supplies Janitorial Services BOON NOT REPAIR Externinator serv COPY Nachine Rental Office Supplies Invoice Type (GL Description) The team looked closer at the 332 SBE invoices valued at less than \$1,000, for 4

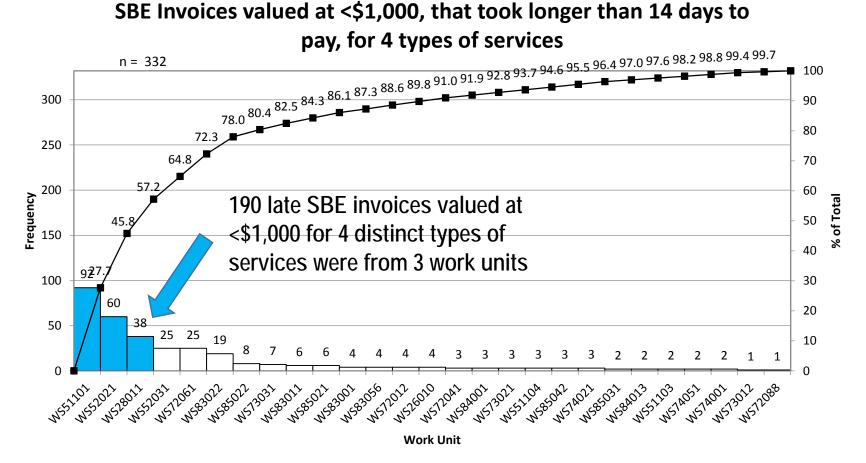
SBE Invoices valued at <\$1,000, that took longer than 14 days to pay

types of goods and services took longer than 14 days to pay.

'Improve[>]Control Measure Analyze Define



The team further stratified the sample of <u>SBE</u> invoices that took longer than 14 days to pay and were valued at <\$1,000, by invoice type, and found:

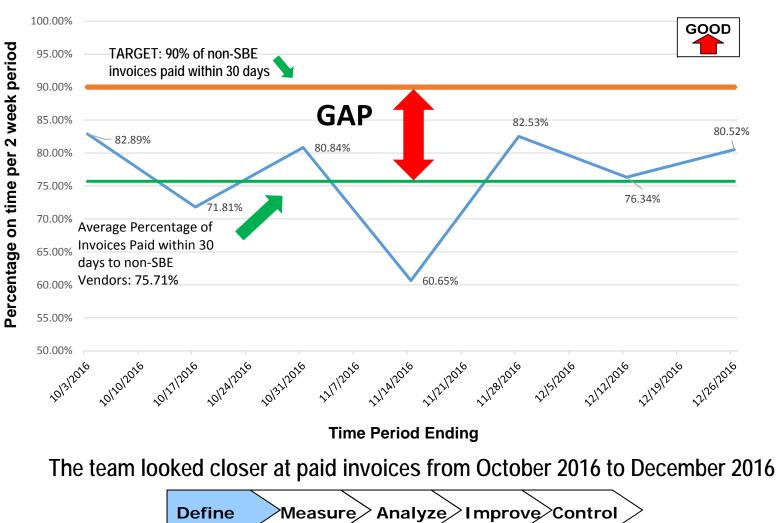


Problem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 types of goods and services, and belonged to 3 different work units

Define Measure Analyze Improve Control

Review Selected Indicator

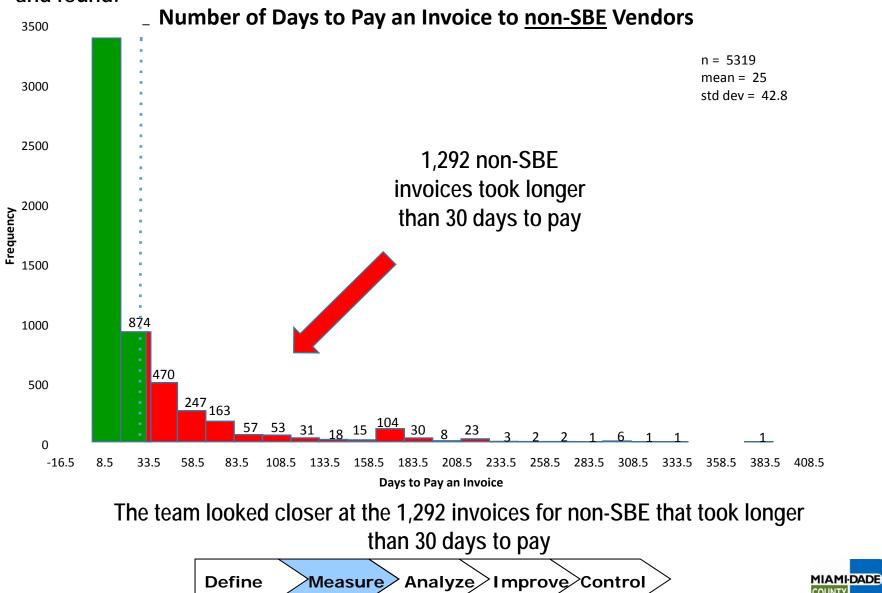
The team collected sample outcome indicator data from October 2016 through December 2016 for <u>non-SBE</u> Goods and Services invoices and reviewed performance trends:



Percentage of Invoices Paid within 30 Days to <u>non-SBE</u> Vendors

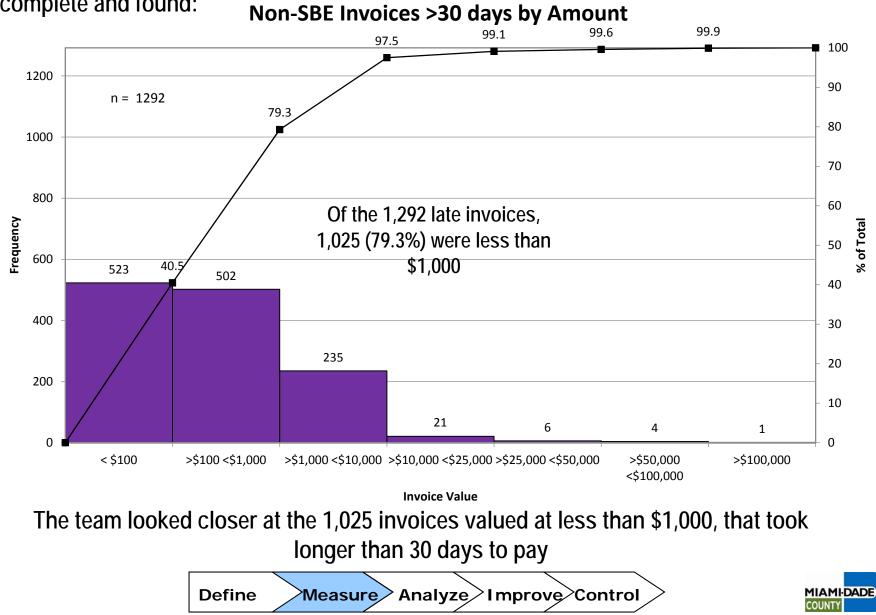
12

The team stratified the sample of <u>non-SBE</u> invoices that took longer than 30 days to pay and found:

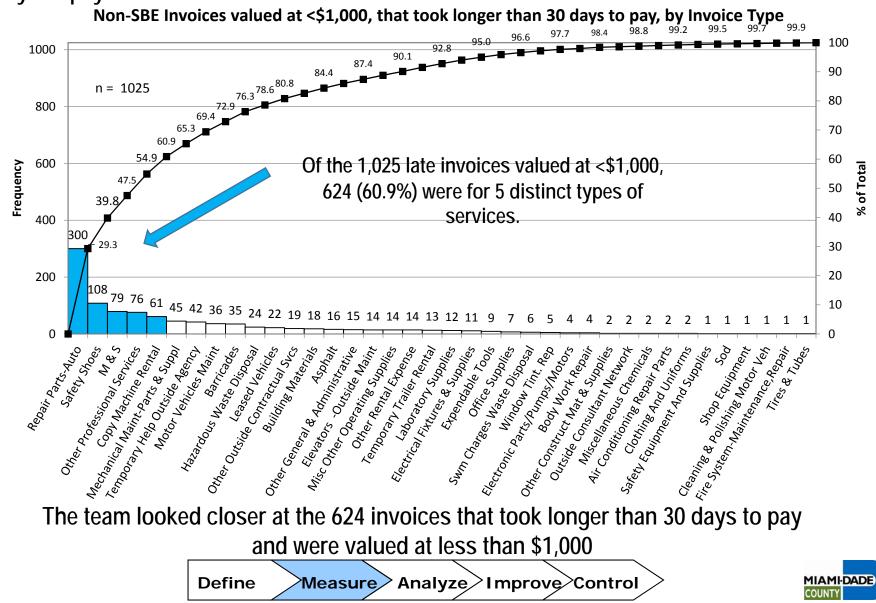


13

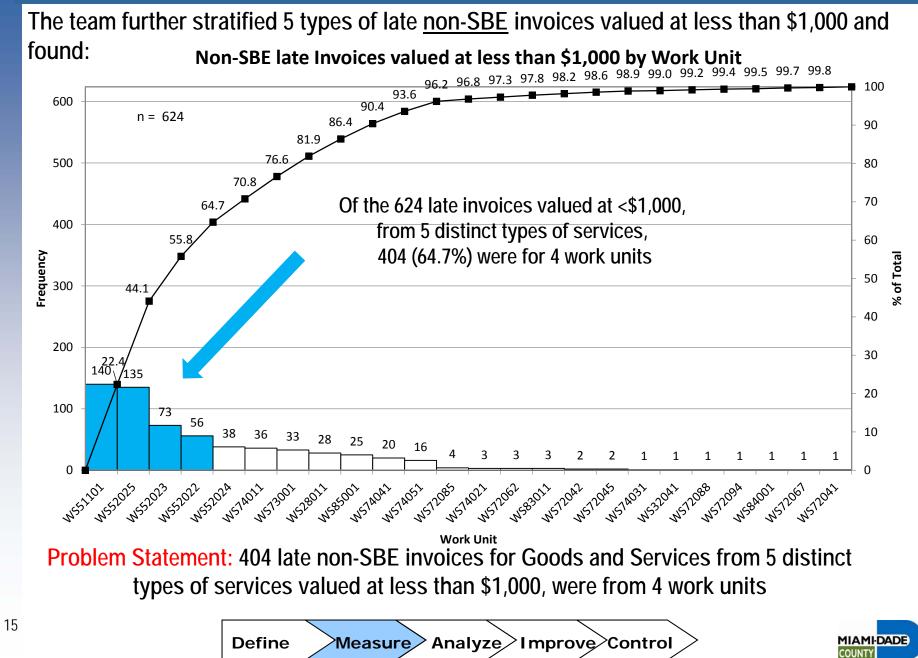
The team stratified the sample of <u>non-SBE</u> invoices that took longer than 30 days to complete and found: Non-SBE invoices >30 days by Amount



The team further stratified the invoices valued at less than \$1,000, that took longer than 30 days to pay and found:



14



The team stratified both SBE and non-SBE invoices and came up with 2 problem statements:

Problem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 types of goods and services, and belonged to 3 different work units

Problem Statement: 404 late non-SBE invoices for Goods and Services from 5 distinct types of services valued at less than \$1,000, were from 4 work units

Next, the team looked closer at selected invoices.



Define Measure Analyze Improve Control

Single Case Bore Analysis

The team reviewed 20 SBE invoices valued less than \$1,000 for 4 types of goods and services that took longer than 14 days and belonged to 3 different work units.

Problem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 types of goods and services, and belonged to 3 different work units

| | Sampled 20 of the 190 Invoices | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|---------|----------|----------|-------|-------|-------|-------|-------|-------|-------|------------------------|--|
| Reasons or Factors (That possibly contributed to delays in payment) | 230085 | 236179 | 236703 | 237653 | 234425 | 237025 | 235727 | 63415 | 63438 | 64242 | 63850 | 1080832 | S1528895 | S8898317 | 27639 | 21649 | 21655 | 21661 | 21660 | 21649 | Total | P _{ercentage} | |
| Delay in creating requisition number by end user | х | | | | | | | | | | | | | | | | | | | | 1 | 5% | |
| Delay in Accounts Payable | | х | | | | | | | | | | | | | | | | | | | 1 | 5% | |
| Delay in entering receipt into system | | X | | | | | | | | | | | | | | | | | | | 1 | 5% | |
| Delay after rejection in Communication | | | X | X | X | X | Х | | | | | | | | | | | | | | 5 | 25% | |
| Delay in making payment after approval | | | | | | | | х | х | х | х | | | | х | х | х | х | х | х | 10 | 50% | |
| Delay in receiving complete invoice | | | | | | | | | | | | | x | | | | | | | | 1 | 5% | |
| PO amount and Invoice amount did not match | | | | | | | | | | | | | | x | | | | | | | 1 | 5% | |
| | | | | | | | | | | | | | | | | | | | | | 0 | | |
| | | | | | | | | | | | | | | | | | | | | | 0 | | |
| | | | | | | | | | | | | | | | | | | | | | 0 | | |
| | | | | | | | | | | | | | | | | | | | | | 0 | | |
| | | | | | | | | | | | | | | | | | | | | | 0 | | |



Measure Analyze Improve Control Define

Single Case Bore Analysis

The team reviewed 30 late Non-SBE invoices from 5 distinct types of services valued at less than \$1,000 were from 4 different work units.

Problem Statement: 404 late non-SBE invoices for Goods and Services from 5 distinct types of services valued at less than \$1,000, were from 4 work units.

| | | | | | | | | | | | | | | Sam | pled | Sampled 30 of the 404 Invoices | | | | | | | | | | | | | | | |
|--|-------|------|--------|----------|------|------|------|------|--------|-----------|---------|-----------|----------|----------|----------|--------------------------------|---------|-------|--------|--------|---------|--------|--------|------|--------|--------|---------|---------|---------|-------|------------|
| Reasons or Factors (That possibly contributed to delays in payment) | 2500. | 2275 | 134.05 | 13415270 | 2072 | 1602 | 2005 | 2500 | 120046 | 12800-208 | 1311525 | 922990355 | 12899725 | 13119195 | 13119190 | 13115268 | 1200971 | 13146 | 129005 | 206.90 | 9229000 | 206900 | 355600 | 1618 | 473080 | 336502 | 1311554 | 1311910 | 1290070 | rotal | Percentage |
| Delay in entering receipt into system | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3% |
| Delay in creating requisition number by end users | | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 7% |
| Delay in Accounts Payable (Personnel Issue) | | | | x | x | x | x | x | x | x | x | x | x | x | x | (x | X | x | х | x | x | x | X | x | x | x | x | x | 2 | 6 8 | 87% |
| Delay in Accounts Payable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | 1 | 3% |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | (| כו | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | (|) | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | (|) | |

Next, the team took a closer look at the factors to identify potential root causes



Define Measure Analyze Improve Control

Root Cause Analysis

| | | - | able Goods and Services t Cause Analysis | Process | |
|---|--|--|---|---------|--|
| Factors | Why? | Why? | Why? | Why? | Verified Root Cause(s) |
| Delay in Accounts Payable (Personnel | Staff is not performing at a sufficient level | Staff not accepting training / refresher coaching | training / refresher | | A: No training manual or procedure for key processes or procedures |
| Issue) | Training was not required (optional) prior to disciplinary action | | | | B: No written policy requiring retraining, if deemed necessary |
| Delay in making payment | Staff did not enter information in the system in order to create a voucher | | | | C. No written or formal internal time requirement for entering information into system |
| after approval | Staff did not enter information in the system in order to create a voucher | Staff is not held accountable | | | D: No internal written standard for what triggers the various steps in the progressive disciplinary process |
| Delay after rejection in | Invoices were being rejected by the Communications Division for being incomplete. | Invoices were missing information (towing, zones, route #s, mileage, etc) | Vendor was not aware of requirements | | E: Vendor was not sufficiently informed of requirements |
| Communication Division | Communication Division staff perceives invoices as duplicates and rejects them | | | | F: No formal policy or delineation of responsibilities between AP and users / divisions / customers |

Only verified root causes are shown. The team verified potential root causes through discussions with AP staff and management. Next, the team developed countermeasures.

Measure Analyze Improve Control Define



Countermeasures Matrix

20

The team developed countermeasures to improve WASD's accounts payable process.

| Countermeasures Matrix WASD Accounts Payable Goods and Services Payments | Ratings 5 = Ext 3 = Av | Legend: tremely verage Poor | | |
|--|------------------------------|--------------------------------------|------------------------|---------------------------|
| blem Statement: 404 late non-SBE invoices for Goods and Services from 5 distinct types of services valued at less than \$1,000, were from 4 work blem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 types of goods and services, and nged to 3 different work units | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Verified Root Cause - A No training manual or procedure for key processes or procedures | Effe | Ĕ | E) | Tak Y |
| Countermeasure A-1 Create a training manual for the Accounts Payable unit that includes procedures, processes, and department-specific policies. Receive input from staff and end-users in order to develop a training manual. Involve the business process unit in the creation of the training manual | 5 | 5 | 25 | Yes |
| Countermeasure A-2 Hire a consultant to review the Accounts Payables unit and develop the training manual | 1 | 1 | 1 | No |
| Countermeasure A-3 Distribute a copy of the training manual to all Accounts Payable staff and ensure that employees acknowledge its receipt | 5 | 5 | 25 | Yes |
| Verified Root Cause - B No written policy requiring retraining, if deemed necessary | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Countermeasure B-1 Incorporate retraining policies into training manual distribution form (See Countermeasure A-3) | 5 | 5 | 25 | Yes |
| Countermeasure B-2 Develop performance measures for the Accounts Payable unit. Memoranda from the Accounts Payable supervisor would follow up if performance is below the identified target | 3 | 5 | 15 | Yes |
| Countermeasure B-3 Identify performance levels that would trigger training and retraining requirements (See Countermeasure B-2) | 3 | 5 | 15 | Yes |
| Countermeasure B-4 Develop a policy/procedure to ensure that all Accounts Payable new hires go through some form of training on ERP and the AP systems (See Countermeasure A-1) | 5 | 3 | 15 | Yes |
| Countermeasure B-5 Create and maintain a training log for all Accounts Payable employees | 5 | 4 | 20 | Yes |
| Countermeasure B-6 Ensure that supervisors proactively engage with their employees to address training deficiencies and other areas of potential need | 3 | 4 | 12 | Yes |
| Countermeasure B-7 Develop a mechanism for obtaining input (feedback, reports, and mistakes that consistently occur) from end-users prior to retraining (See Countermeasure F-3) | 3 | 1 | 3 | No |

Countermeasures Matrix (continued)

| Countermeasures Matrix WASD Accounts Payable Goods and Services Payments | 3 = Av | remely | | |
|---|--------------------|------------------|------------------------|---------------------------|
| Problem Statement: 404 late non-SBE invoices for Goods and Services from 5 distinct types of services valued at less than \$1,000, were from 4 work units Problem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 types of goods and services, and belonged to 3 different work units | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Verified Root Cause - C No written internal time requirement for entering information into the ERP system (3-way invoices) | Effect | Fea | O (E ti | Take Yes |
| Countermeasure C-1 Create requirement on when lines from the "Unmatched Report" should be matched | 4 | 3 | 12 | Yes |
| Countermeasure C-2 Have supervisors create a suggested schedule to assist staff in prioritizing required tasks | 3 | 3 | 9 | No |
| Countermeasure C-3 Reduce the usage of the voucher form and other manual forms (green or white forms). These guidelines would be incorporated into the training manual (See Countermeasure A-1) | 5 | 4 | 20 | Yes |
| Verified Root Cause - D No internal or formal standard for what triggers the various steps in the progressive disciplinary process | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Countermeasure D-1 Keep records of employee performance based on the identified productivity measures (See Countermeasure B-2) | 4 | 4 | 16 | Yes |
| Countermeasure D-2 Use training and retraining as an alternative to the disciplinary process, whenever possible | 4 | 4 | 16 | Yes |
| Countermeasure D-3 Conduct informal sit-downs with staff performing below identified productivity measures (See Countermeasure D-1) | 4 | 5 | 20 | Yes |
| Countermeasure D-4 Consider performance level and peer feedback during disciplinary process (See Countermeasures under Verified Root Cause B) | 2 | 2 | 4 | Νο |

Countermeasures Matrix (continued)

| Countermeasures Matrix WASD Accounts Payable Goods and Services Payments | 5 = Ex 3 = A | Legend: tremely verage Poor | | |
|---|--------------------|--------------------------------------|------------------------|---------------------------|
| blem Statement: 404 late non-SBE invoices for Goods and Services from 5 distinct types of services valued at a than \$1,000, were from 4 work units blem Statement: 190 SBE invoices that took longer than 14 days to pay were valued at less than \$1,000, for 4 as of goods and services, and belonged to 3 different work units | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Verified Root Cause - E Vendor was not sufficiently informed of requirements | Effe | Е | (E C | Takı Ye |
| Countermeasure E-1 Meet with WASD Procurement to review that the relevant invoice information is listed in current contracts (addresses, PO numbers, etc.) | 4 | 5 | 20 | Yes |
| Countermeasure E-2 Add the required/relevant invoice information list to all check stubs | 5 | 1 | 5 | No |
| Countermeasure E-3 Inform vendors of required/relevant invoice information via vendor notice letters. Vendors would be informed of requirements every 6 months | 5 | 5 | 25 | Yes |
| Countermeasure E-4 Update the vendor notice letter language to address process for invoices that do not have a PO number | 5 | 5 | 25 | Yes |
| Countermeasure E-5 Include vendor notice letter as an attachment to all ACH confirmation e-mails | 5 | 3 | 15 | No |
| Countermeasure E-6 Bring in vendors to train and retrain them on the requirements. Make this a requirement for all new vendors | 5 | 2 | 10 | No |
| Verified Root Cause - F No formal policy or delineation of responsibilities between Accounts Payable and other end-users, divisions, and customers | Effectiveness E | Feasibility F | Overall (E times F) | Take Action? Yes or No |
| Countermeasure F-1 Issue memorandum from the Controller division to all end users on the information that is required in order for the Accounts Payable unit to process an invoice | 4 | 4 | 16 | Yes |
| Countermeasure F-2 Conduct annual trainings to educate end-users on the Accounts Payable process, policies, and practices | 4 | 3 | 12 | Yes |
| Countermeasure F-3 Meet quarterly with end-users on the relevant responsibilities and procedures (See Countermeasures B-7 and F-2) | 2 | 1 | 2 | No |
| Countermeasure F-4 Hold end-users accountable by sending quarterly report to Division Directors | 2 | 1 | 2 | No |

Action Plan

The team developed an action plan to monitor who would be responsible for implementing the selected the countermeasures and by when.

| WASD Accounts Payable Goods and Services Payment Action Plan | Take Action? Yes or No | Responsible Person(s) | Target Date | | |
|--|---------------------------|--|-------------|--|--|
| Countermeasure A-1 Create a training manual for the Accounts Payable unit that includes procedures, processes, and department- specific policies. Receive input from staff and end-users in order to develop a training manual. Involve the business process unit in the creation of the training manual | Yes | Monique Caliste Patrice Sykes | Dec 2017 | | |
| Countermeasure A-3 Distribute a copy of the training manual to all Accounts Payable staff and ensure that employees acknowledge its receipt | Yes | Lucille Benjamin | Mar 2018 | | |
| Countermeasure B-1 Incorporate retraining policies into training manual distribution form (See Countermeasure A-3) | Yes | Monique Caliste Patrice Sykes Lucille Benjamin | | | |
| Countermeasure B-2 Develop performance measures for the Accounts Payable unit. Memoranda from the Accounts Payable supervisor would follow up if performance is below the identified target | Yes | | | | |
| Countermeasure B-3 Identify performance levels that would trigger training and retraining requirements (See Countermeasure B-2) | Yes | | Dec 2017 | | |
| Countermeasure B-4 Develop a policy/procedure to ensure that all Accounts Payable new hires go through some form of training on ERP and the AP systems (See Countermeasure A-1) | Yes | | | | |
| Countermeasure B-5 Create and maintain a training log for all Accounts Payable employees | Yes | Monique Caliste Patrice Sykes | Dec 2017 | | |
| Countermeasure B-6 Ensure that supervisors proactively engage with their employees to address training deficiencies and other areas of potential need | Yes | Lucille Benjamin | Ongoing | | |
| Countermeasure C-1 Create deadline for when lines from the "Unmatched Report" should be matched | Yes | | | | |
| Countermeasure C-3 Reduce the usage of the voucher form and other manual forms (green or white forms). These guidelines would be incorporated into the training manual (See Countermeasure A-1) | Yes | Dec | | | |



Action Plan (continued)

| WASD Accounts Payable Goods and Services Payment Action Plan | Take Action? Yes or No | Responsible Person(s) | Target Date |
|--|---------------------------|--|-------------|
| Countermeasure D-1 Keep records of employee performance based on the identified productivity measures (See Countermeasure B- 2) | Yes | | |
| Countermeasure D-2 Use training and retraining as an alternative to the disciplinary process, whenever possible | Yes | Monique Caliste Patrice Sykes Lucille Benjamin | Jan 2018 |
| Countermeasure D-3 Conduct informal sit-downs with staff performing below identified productivity measures (See Countermeasure D- 1) | Yes | , | |
| Countermeasure E-1 Meet with WASD Procurement to review that the relevant invoice information is listed in current contracts (addresses, PO numbers, etc.) | Yes | Melissa Belmonte | Dec 2017 |
| Countermeasure E-3 Inform vendors of required/relevant invoice information via vendor notice letters. Vendors would be informed of requirements every 6 months | Yes | Monique Caliste Patrice Sykes | |
| Countermeasure E-4 Update the vendor notice letter language to address process for invoices that do not have a PO number | Yes | Lucille Benjamin | Dec 2017 |
| Countermeasure F-1 Issue memorandum from the Controller division to all end-users on the information that is required in order for the Accounts Payable unit to process an invoice | Yes | Melissa Belmonte | |
| Countermeasure F-2 Conduct annual trainings to educate end-users on the Accounts Payable process, policies, and practices | Yes | Monique Caliste Patrice Sykes Lucille Benjamin | Mar 2018 |



Measure Analyze Improve Control Define

Identify Barriers and Aids

Implement 18 countermeasures to improve the number of days to pay a vendor invoice

| | Barriers | | Aids |
|-------------------------------------|---|---|---|
| Impact (High, Medium, or Low) | Forces Against Implementation | | Forces For Implementation |
| High | Field employees/storeroom may not prioritize implementation of the team's countermeasures (Supported by Aid: A, C) | А | Some AP employees have requested additional training. |
| Low | Possible unwillingness of employees to put training into practice (Supported by Aid: A, C) | В | Vendors would be receptive to the idea of getting paid faster. |
| | | С | This process is important to upper management. |
| | | D | The availability of good data (including tracking SBEs) and the accessibility of queries and reports. |



Measure Analyze mprove Control Define

Standardize the Countermeasures

The team developed a Process Control System (PCS) to monitor the implementation of the process.

| Process Control System | | | | | | |
|---|--|---------------------|--|-----------------------------|---|--|
| Process Name: Pay Goods and Services Vendor Invoices | | | Process Owner: Josephine Barrios | | | |
| Indicators | | | Checking / Indicator Monitoring | | | |
| Process Indicators And | | Control Limits | Data to Collect | Timeframe (Frequency) | Responsibility | |
| Quality Indicators | | Specs/ Targets | What is Checking Item or Indicator Calculation | When to Collect Data? | Who will Collect Data? | Comments |
| P1 | Average # of days from invoice received by AP to voucher creation (3-way match) | 10 calendar days | ERP query request | Monthly | M. Caliste, L. Benjamin, P. Sykes | Assumes receipt has been entered |
| P2 | Average # of days from invoice received by AP to voucher creation (2-way match) | 14 calendar days | ERP query request | Monthly | M. Caliste, L. Benjamin, P. Sykes | |
| P3 | Average # of days from invoice received by AP to storeroom receipt entered | 14 calendar days | ERP query request | Monthly | M. Caliste, L. Benjamin, P. Sykes | Treat negative numberas °0° |
| P4 | Average # of days from check run date to check mail date | 3 calendar days | Manual log created by Erica Lee (Account Clerk) | Monthly | M. Caliste, L. Benjamin, P. Sykes | This is not an average of individual checks, this is an average of batches mailed |
| P5 | Average # of days from storeroom receipt entered to voucher creation | 3 calendar days | ERP query request | Monthly | M. Caliste, L. Benjamin, P. Sykes | |
| Q1 | Percent (%) of non-SBE goods and services invoices paid within 30 days | 90% | ERP query request | Quarterly | J. Barrios | |
| Q2 | Percent (%) of SBE goods and services invoices paid within 14 days | 90% | ERP query request | Quarterly | J. Barrios | New field on the Purchase Order header |



Define Measure Analyze Improve Control

Lessons Learned

- 1) The project shed light on the many challenges that are involved in paying an invoice both within AP and throughout the department.
- 2) Team members' willingness to devote time to several long work sessions and openness to critically examining the AP processes were essential to the success of this project.
- 3) The project highlighted the importance of employee development and supervision.
- 4) Worked with Storeroom personnel to achieve buy-in on meeting targets.
- 5) Active participation from supervisors with direct involvement in the process was also a key factor in the success of this project.
- 6) External review validated some of the management concerns in AP.

Next steps:

- 1) Implement approved countermeasures
- 2) Monitor results and make necessary course corrections



