Green Belt Six Sigma Project Report Out
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Ohio Department of Public Safety
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OHIO EMS CERTIFICATION PROCESS
TEAM MEMBERS: TRAIL CHART

ODPS – Ohio EMS
- Geoff Dutton, Green Belt
- Patrick Wilson, Green Belt
- Melvin House, EMS Director
- Ellen Owens, EMS Certification Supervisor
- Jean Booze, EMS Certifications
- John Sands, EMS Audits
- Sarah Hansen, ODPS IT
- Kathy Mahl, IT Relationship Manager

Outside Agencies
- Ohio EMS Board
- Ohio Fire Academy
- Butler Tech
- Great Oaks
- Mid-East CTC
STAKEHOLDERS

- State EMS Board
- ODPS Director’s Office
- State Division of EMS
- Paramedics
- Emergency Medical Technicians
- Advanced EMT
- EMS Instructors
- Schools and Training Facilities
EMS offers certification processes both online and on paper
- Certifications number over 100,000 EMT’s, firefighters, instructors and inspectors
- Fire and EMS certifications must be renewed every 3 years

Too many applications for certifications require manual processing by EMS Staff
- Paper Applications
  - On average, 672 of the 14,303 certifications are done manually, or about 5% annually
- Defects
  - Many online applications require manual processing:
    - Incomplete
    - Errors
    - Potential Disqualifying Information
SCOPE OF PROJECT

Beginning Step
Applicant submits forms to EMS for approval

Ending Step
Applicant receives notice of certification from EMS
PROJECT GOALS

- Clarify EMS and Fire certification processes
- Streamline certification processes
- Ensure certifications are processed accurately and in a timely manner
- Allow for the routine tracking of applications as they move through the process
TEAM BRAINSTORMING
INITIAL PAPER APPLICATIONS
EMS & Fire - Aug 2012 - Feb 2013

- Basic EMT: 373
- Paramedic: 186
- CE Instructor: 176
- Fire Instructor: 160
- Firefighter I: 141
- Fire Safety Inspector: 63
- EMS Instructor: 59
- First Responder: 51
- Intermediate: 23
- Volunteer Firefighter: 17
- Firefighter II: 16
- Physician EMS Instructor: 10
- Assistant Fire Instructor: 10
- EMS Asst. Instructor: 6
TOP 10 SCHOOLS

Initial Paper Applications, Aug 2012 -

Butler Tech  Cuyahoga Community College  Ohio Fire Academy  Cincinnati Fire  University of Cincinnati  Parma Hospital  Great Oaks  Mid-East CTC  Vanguard Sentinel Career Center  Lorain County Community College

7% of all schools submitted over 50% of all paper apps!
This is an opportunity to impact a far greater number of applicants to change our process by notifying a small number of schools.
### PROJECT METRICS - SCHOOLS INITIAL APPS

<table>
<thead>
<tr>
<th>Measure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Processing</td>
<td>Reduce by more than 50%</td>
</tr>
<tr>
<td>Redirected Hours</td>
<td>4 hours per week</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before</th>
<th>After</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>[# Paper Applications]</td>
<td>44 / week</td>
<td>23 / week</td>
<td>-21 / week</td>
</tr>
</tbody>
</table>
3 “loop-backs” identified in the current process can be eliminated by revising the current forms we use
FORMS

A review of the process led to a review of the forms
Benefits of Recommended Forms Changes

- Reduced Processing Time
  - Possible 64% reduction
- Less phone calls
- Smooth transition to online process
### Measure Result

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before</th>
<th>After</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste – 3 loop-backs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eliminated 3 areas of waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Process Steps]</td>
<td>45</td>
<td>35</td>
<td>-10 steps</td>
</tr>
<tr>
<td>[Handoffs]</td>
<td>15</td>
<td>10</td>
<td>-5 handoffs</td>
</tr>
<tr>
<td>[Decisions]</td>
<td>15</td>
<td>9</td>
<td>-6 decision</td>
</tr>
<tr>
<td>[Waste Points]</td>
<td>3</td>
<td>0</td>
<td>-3</td>
</tr>
<tr>
<td>[Minimum Turnaround time]</td>
<td>11 days</td>
<td>5 days</td>
<td>-6 days</td>
</tr>
<tr>
<td>[Maximum Turnaround Time]</td>
<td>152 days</td>
<td>115 days</td>
<td>-37 days</td>
</tr>
</tbody>
</table>
RENEWAL PAPER APPLICATIONS

EMS & Fire - Aug 2012 - Feb 2013
EMS AUDITS

- The audit section knew anecdotally that they were sending out some audits to the wrong people or with incorrect information
- How many were going out?
- Why were they going out with errors?
On 16th of month, chooses 10% of prev. month renewals for audit

EMS Certification Database

Retrieves list from Certification Database

Saves Report to.pdf form for printing

Opens .pdf saved file

Prints up to 300 pages at a time until all pages complete

Printing Complete?

EMS Auditor

Prepares Audit Letters for Mailing

Goes to 1st Notice e-mail

Inputs Parameters for e-mail

Submits command to send e-mail

Sends e-mail notices to those being audited

In Certification Database, update 1st Notice Mail Date

Pulls up “Get All Audited Persons” Report

Clicks on Details for each name on the list

Check Certification begin date on Audit List

Runs “Audit - Basic Search” of the same person by entering Certification #

Check Certification begin date on Basic Search List

Do they match?

Add name to spreadsheet for IT’s attention

Are all names checked?

Add name to spreadsheet for IT’s attention

Click on Details, check next name on list

Click on Details, check next name on list

This process was repeated 209 times in January, 2013 until completed. Time necessary for completion: 2-3 days.
EMS Audits in January resulted with 16% in error – Audits put on hold for two months to resolve the issue.

Random errors weren’t so random after all.

People who had Fire Instructor certifications seemed to be having a computer error thrown into the report.

<table>
<thead>
<tr>
<th>Certification Levels:</th>
<th>Total Records Audited:</th>
<th>Total Errors Found:</th>
<th>Percent of Level Errors</th>
<th>Percent of Total Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Instructor</td>
<td>8</td>
<td>8</td>
<td>100%</td>
<td>24%</td>
</tr>
<tr>
<td>Fire Safety Inspector</td>
<td>24</td>
<td>3</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>Firefighter I</td>
<td>7</td>
<td>1</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Firefighter II</td>
<td>56</td>
<td>9</td>
<td>16%</td>
<td>27%</td>
</tr>
<tr>
<td>Volunteer Firefighter</td>
<td>12</td>
<td>1</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Fire Totals</td>
<td>108</td>
<td>23</td>
<td>21%</td>
<td>70%</td>
</tr>
<tr>
<td>EMS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic EMT</td>
<td>35</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>CE Instructor</td>
<td>4</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>EMS Assistant Instructor</td>
<td>1</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>EMS Instructor</td>
<td>5</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>First Responders</td>
<td>5</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Intermediate (EMT)</td>
<td>15</td>
<td>5</td>
<td>33%</td>
<td>15%</td>
</tr>
<tr>
<td>Paramedic (EMT)</td>
<td>36</td>
<td>5</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>EMS Totals</td>
<td>101</td>
<td>10</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>209</td>
<td>33</td>
<td>16%</td>
<td></td>
</tr>
</tbody>
</table>
On 16th of month, chooses 10% of prev. month renewals for audit

EMS Certification Database

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Printing Complete? Y

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N

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N

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Do they match?

N

Click on Details, check next name on list

Do they match?

Y

Add name to spreadsheet for IT’s attention

Are all names checked?

Y

Send spreadsheet to IT for corrections

Makes Corrections in database

IT

EMS Audits Process Map - Current State

Labor intensive, costly waste of time, manpower and materials
By providing the audit notifications by both e-mail and mail, the process is quite costly.

Can it be done just by e-mail?
TIME SAVED BY ELIMINATING ERRORS

- 24 hours per month for one employee to manually check the audits for accuracy
- 9 hours per month by three employees to print, stuff and mail audits
- A total of 33 hours of work per month realized as savings
IMPROVEMENT SUMMARY

Current Key Issues

- Too many paper apps from a handful of schools
- Too many applications incomplete or in error
- Errors in audits and an inefficient process

How We Improved

- Identified and contacted schools to submit apps online
- Simplified forms and streamlined processes
- Pin-pointed computer errors, offered cost-saving solution to the process
WHAT’S NEXT?

- 16 EMS Application Forms
  - 3 Process Maps done
  - 13 Process Maps pending
- 10 Fire Application Forms
  - All pending review
- Focus on Notification Process for renewals
- Review online errors
- Develop Implementation Plan
- Develop Control Plan
SPECIAL THANKS TO SENIOR LEADERSHIP

ODPS Director Thomas P. Charles

Sponsor: Mel House, EMS Director
QUESTIONS/COMMENTS