Employee Verified Time (EVT) within SLDCADA Interface DMAIC Process Improvement Initiative

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Problem Statement

PROBLEM STATEMENT: BUMEDINST 12000.1G established SLDCADA as the primary mechanism for capturing and verifying civilian work hours. Each civilian is required to verify their time at the end of each pay cycle (EVT – Employee Verification of Time). BUMED has established a threshold of 95% EVT compliance at the close of each pay period. However, from 19 OCT 13 – 17 MAY 14, compliance has ranged from 78.24%-90.69% across all directorates, with the Directorate of Nursing Services (DNS) having the highest rate of non-compliance (78%). This has impacted the ability of the department of resource management to maintain audit readiness (BUMED Strategic Goal V3) and compliance with BUMED instructions.

PROJECT GOAL: To establish and implement an efficient and sustainable process for SLDCADA schedule changes ensuring employee verification of time (EVT) compliance of 90-95% or greater.

Define

VOICE OF THE CUSTOMER (VOC): The following was identified as critical to the quality of the project by the respective members:

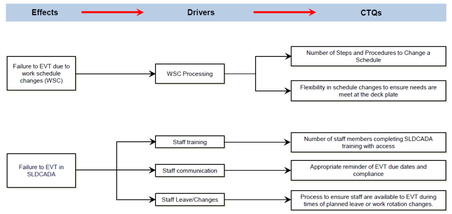
FINANCIAL MANAGEMENT DEPARTMENT:

- Increase compliance of EVT within DNS
- Improve overall rate of compliance across all directorates to 95%
- Implement a process which is complaint with BUMEDINST 12000.1G

DIRECTORATE OF NURSING SERVICES

- Greater flexibility in work schedule changes (WSC) through SLDCADA
- Dedicated point of contact in Financial Management to problem solve SLDCADA issues
- Ability to input work schedule changes directly into SLDCADA based on ward shift demands.

CRITICAL TO QUALITY



TIME INTERVAL: Data collection and iterative improvement was schedule to take place in quarters over a 2 year period (F14-F16) to ensure process stability and control.

Measure

DATA COLLECTION PLAN: The following metrics were utilized over the time period to collect and analyze the interval improvement in EVT compliance rate.

Data Collection Plan (Pre-Implementation)

Performance Measures	Operational Definition	Data Location	Collect Process	Find	Collection Data	Sample Size	Stratification	How will it be used
EVT Compliance for DNS	Metric = Number of EVT/Total DNS Work Force	SLDCADA	DRM Collet	DRM	Quarterly	All DNS civilian employees	None	Compliance
EVT Compliance by Ward	Metric = Number of EVT/Total Ward employees	SLDCADA	DRM Collet	DRM	Quarterly	All DNS civilian employees	None	Compliance
EVT Compliance by Cause	Metric = Number of EVT/Total DNS employees	SLDCADA	DRM Collet	DRM	Quarterly	All DNS civilian employees	None	Compliance

DATA DEFINITION: The data was allocated and analyzed based on the following definitions from the raw EVT non-compliance report by the local work supervisors.

Category	Reason
Leave	Employee was placed on leave and was unable to EVT
Unavailable	Employee was unavailable to EVT due to family emergency, SIQ, or unknown reasons.
Access	Employee was unable to access the SLDCADA
Technical Issues	Employee access to the computer network was limited due to multiple reasons
Coding	Supervisor changed work hours coding, employee failed to EVT's or failed to re-EVT updated work schedule
Non-compliance	Employee failed to EVT, no reason provided. Employee was counseled
Incorrect EVT	Employee EVT'd wrong work hours, supervisor corrected and updated
Work Schedule Change	Employee unable to EVT due to pending work schedule change

BASELINE DATA: The EVT SLDCADA data was reviewed and analyzed by root cause and ward. The top contributing wards were further analyzed by total percentage of cause to identify areas of improvement.

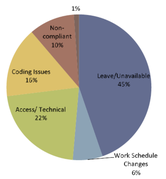


Figure 1: Breakdown by cause

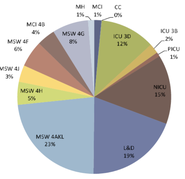


Figure 2: Breakdown by ward

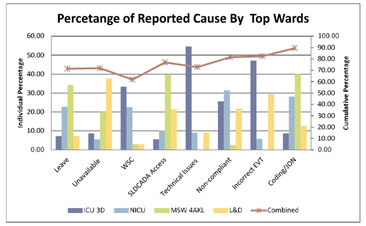


Figure 3: Breakdown by highest level of ward non-compliance with root cause

Analyze

CURRENT STATE: Based on the baseline data, the highest non-compliant wards were targeted for identification of the current state process map and key issues as below.

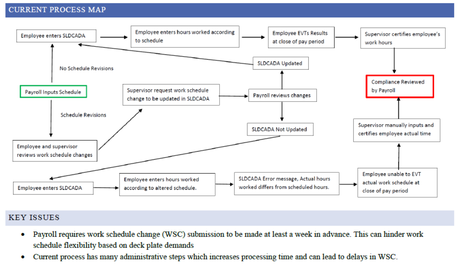


Figure 4: Current state process map

ISHIKAWA: A root causes analysis using the Ishikawa diagram was performed to identify measurable steps in improvement.

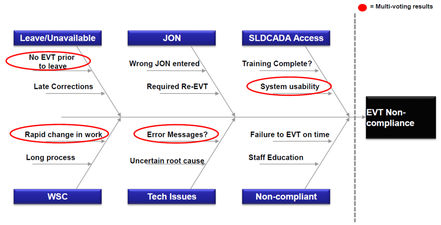


Figure 5: Iskikawa diagram and cause analysis

FUTURE STATE: Based on the data and root cause analysis, a future state process map was developed to eliminate identified choke points.

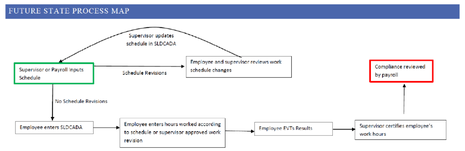


Figure 6: Future state process map

Improve

IMPLEMENTATION: Implementation of the proposed future state occurred in four stages over the two year period.

- **First Intervention:** Rapid improvement in non-EVT causes
- **Second Intervention:** Assessment of process stability
- **Third Intervention:** Rapid improvement prior to work schedule change, full process deployment.
- **Fourth Intervention:** Post work schedule changes, final control analysis post full process deployment

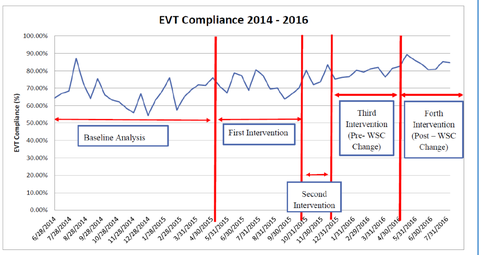


Figure 7: EVT Compliance by stages intervention

ITERATIVE FEEDBACK AND ANALYSIS: Implementation was conducted in stages as described above. After each stage a comprehensive analysis was performed to identify changes and progress in each of the root causes for EVT non-compliance identified. Leadership then acted to implement local improvements to address these issues.

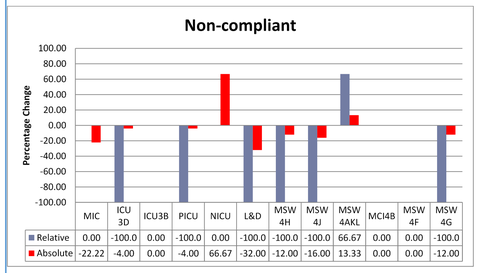


Figure 8: Example data for non-compliance results, second intervention analysis

Control

FINAL ANALYSIS: Two years after the start of the project, a final analysis was conducted to access for process stability and total improvement.

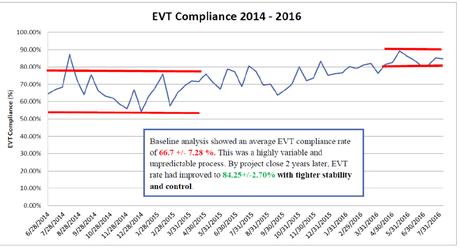
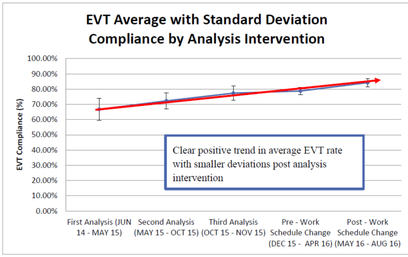


Figure 9: Comparative data analysis from baseline data to project close

DATA POINT TREND: Overall, there was a positive trend and improvement with each successive intervention based on the results of the data analysis.



Analysis Period	Mean	SD	Error Rate	DMPO	Long Term Sigma	Short Term Sigma
First Analysis (JUN 14 - MAY 15)	66.77%	7.28%	33.23%	332300	0.43	1.93
Second Analysis (MAY 15 - OCT 15)	72.27%	5.56%	27.73%	277300	0.59	2.09
Third Analysis (OCT 15 - NOV 15)	77.33%	4.66%	22.67%	226700	0.75	2.25
Pre - Work Schedule Change (DEC 15 – APR 16)	78.75%	2.48%	21.25%	212500	0.80	2.30
Post - Work Schedule Change (MAY 16 - AUG 16)	84.25%	2.70%	15.75%	157500	1.00	2.50

Figure 10: Data analysis by each analysis/stage.

Final Score Card

Overall, the project resulted in a 17.48% total improvement in EVT rate with a 0.57 sigma shift. This brought DNS into stronger compliance with BUMED guidance and directives.

Score Report	
Total Improvement	17.48%
Change in DMPO	174800
Sigma Shift	0.57

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