



SPAWAR
Systems Center
San Diego



Knowledge Engineering for Command and Control Transformation at United States European Command (USEUCOM)



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EUCOM Transformation Goal

Moving from a coordinating command to a controlling command

Identified EUCOM Requirements

Understand current strengths and weaknesses and leverage these to support new CONOPS

We were invited by leadership to perform a “hit-and-run analysis”

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- **Very high expectations**
 - + **Very strong support from senior command levels**

 - **Very little time (1 visit, 20 interviews)**
 - + **Full, enthusiastic participation by EUCOM personnel**

 - **Inevitable resistance to change**
 - + **Staff recognizes need for change**

Study Constraints

Challenges	Solutions
Limited time	Used an abbreviated semi-structured interview process, and preliminary “on-the-fly analysis”
Access to representative depts. and staff	Used cross-section of senior and support staff
Limited documentation on new CONOPS	Collected materials and draft reports regarding transformation while on-site
Expected out-brief on last day	Preliminary on-site brief to leadership summarizing our findings and solutions; conducted full analysis upon return to office

6 days of 1 - 2 hour interviews (20 interviewees)

Identified 12 common themes and developed recommendations for each

Leadership agreed with the themes and change strategies during the preliminary out-brief

- EUCOM plans to implement several if the recommended changes**



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Common Interview Themes

12 Identified Themes at EUCOM

1. High morale and motivation
2. Lack of formal assessments / metrics for current and evolving tools / procedures
3. Insufficient training
4. Inadequate data and information management procedures
5. Lack of common business rules / SOPs
6. Technology / Usability Issues
7. Unclear or conflicting tasking
8. Organizational / personnel issues
9. Briefing and other information products
10. Reliability and accuracy of some data / information
11. Professional development issues and related concerns
12. Situation Awareness (both mission / tactical and organizational)

Personnel generally have a very positive attitude

- Believe that what they do is important and necessary

Personnel are highly motivated

- Many on the staff have found “creative” ways of doing business and are willing to act as champions of change

Most recognize need for change and would embrace opportunity if high payoff was perceived

People make EUCOM work!

Example Theme: Unclear or Conflicting Tasking

Difficult to determine which people / groups across the organizations have been assigned which tasks, who is performing any given task, and what the status of those tasks are

Role and task ambiguity hinder operations!

Possible Solutions:

- **Develop a Web-based tasking management system that allows personnel to easily access, manage, and monitor task responsibilities, status, timelines, interdependencies, and implications**
- **Make explicit areas of responsibility and procedures for resolving ambiguities and de-conflicting tasking**

Things are working at EUCOM the way they are – but only because people are knowledgeable and working hard, and because they have developed numerous work-arounds, accommodations, etc.

- *An increase in tempo / missions, an increase in personnel turnover, or a reduction in manning could spell trouble...*

Meeting EUCOM's future vision / mission will require improvements

- **Support for more, and more complex missions is required**
 - » Hardware, procedures, processes, training, etc.
- **Current systems will not be able to support future missions**

Establish and re-communicate their transformation vision on regular basis

Periodically assess and communicate objectives

- Develop long-term KM POAM & metrics

Develop in-house Change Prototyping Capability

- All technology, upgrades / patches, software/hardware assessed in terms of impacts. Identify & establish metrics
- Assess with real operators working in parallel to existing capability
- Prototype processes – document work arounds
- Generate FAQs & provide guidance documents in a common data store (web-based)
- Move changes across command with supporting FAQs, revised processes, lessons learned – “Keep the pain local” – let others benefit from knowledge

Imagine dominos falling: as each change intervention is implemented, additional changes will be required by the organization

- **On-going training**
- **Monitor and manage morale**
- **Manage ripple effect of the introduction of new technologies**
- **Manage the impact that changes to some practices, policies, procedures have on others, and the impact change strategies have on work-behavior**
- **Continually monitor the “pulse” of the organization; regularly re-assess to gauge the overall system**

The task was challenging but met with great success

- **Used an innovative, abbreviated approach**
- **Identified 12 common themes and developed various recommendations that leadership agreed with**
- **We were invited back to continue supporting and facilitating EUCOM's transformation**
 - » **Identified way ahead will involve knowledge management input and on-going change efforts**
- **EUCOM is well on its way to achieving its transformation goals**
- **Despite “hit-and-run” approach, the output from the analysis was valuable and are currently being used to meet EUCOM's transformation goals**



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Questions

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