Analysis of the Knowledge Management Process in Multinational Experiment 3

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Outline

- Introduction
- Design of MNE 3 with respect to KM
- Results from the analysis of KM in the experiment
- Observations from the KM Chief
- Conclusions and Recommendations
- Considerations for a Limited Objective Experiment (LOE) on KM

Introduction

- Analysis of the KM process in the MNE 3
- Australia, Canada, France, Germany, the United Kingdom, the United States and NATO
- Goal to explore Effects Based Planning (EBP) within a coalition environment
- Two concepts were important to KM in this experiment:
  - Standing Joint Force Headquarters (SJFHQ) concept
  - Collaborative Information Environment (CIE) concept
- KM was a key component of both but integral to the CIE

Context for KM in MNE 3

"Knowledge Management (KM) includes all processes involved in the creation, receipt, collection, control, dissemination, storage, retrieval, protection, and disposition of information. KM also includes processes used to organize information and determine its applicability to a specific person, element or larger process." – quoted from the Coalition Knowledge and Information Management Plan (CKIMP) for MNE 3

KM as a Component of the SJFHQ Concept

KM in the CIE

The CIE is a key enabling capability for SJFHQ that enables it to function from knowledge-centric perspective.

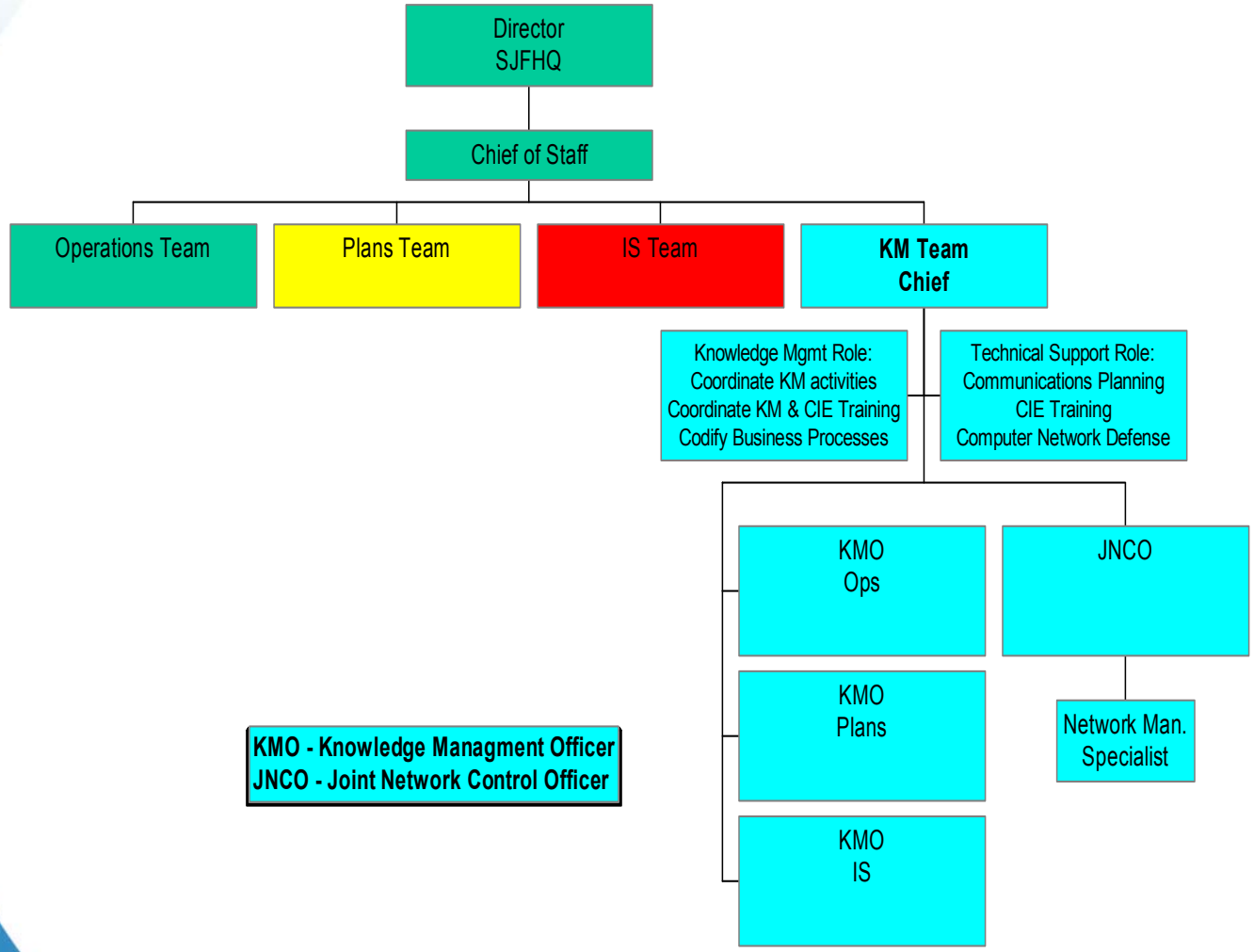
- Key KM features of the experiment:
  - The organization of information in the CIE (or portal)
  - The CONOPS for the CIE (a KM CONOPS)

Experiment Design

- Distributed Coalition Task Force Headquarters (CTFHQ) and NATO Response Force (NRF) Headquarters with an operational planning task
- CIE, including distributed collaboration tools, hosted on Combined Federated Battle Lab (CFBL) network
- Experiment Objectives:
  - To develop and assess processes to support EBP
  - To develop and assess organizations to support EBP
  - To identify technology requirements to support EBP

KM Team Design

- KM Chief (supported by deputy) responsible for:
  - KM vision for the CTFHQ
  - Direct KM operations
  - Support to Commander and Command Group
- Three KM Officers (KMOs) to support the CTFHQ plus one for the CIACG
- Technical staff to support the headquarters including the network
- KM team responsible for organizing the information in the CIE and to ensure CTFHQ staff have access to information required for planning and operations



KM Team Organization Chart

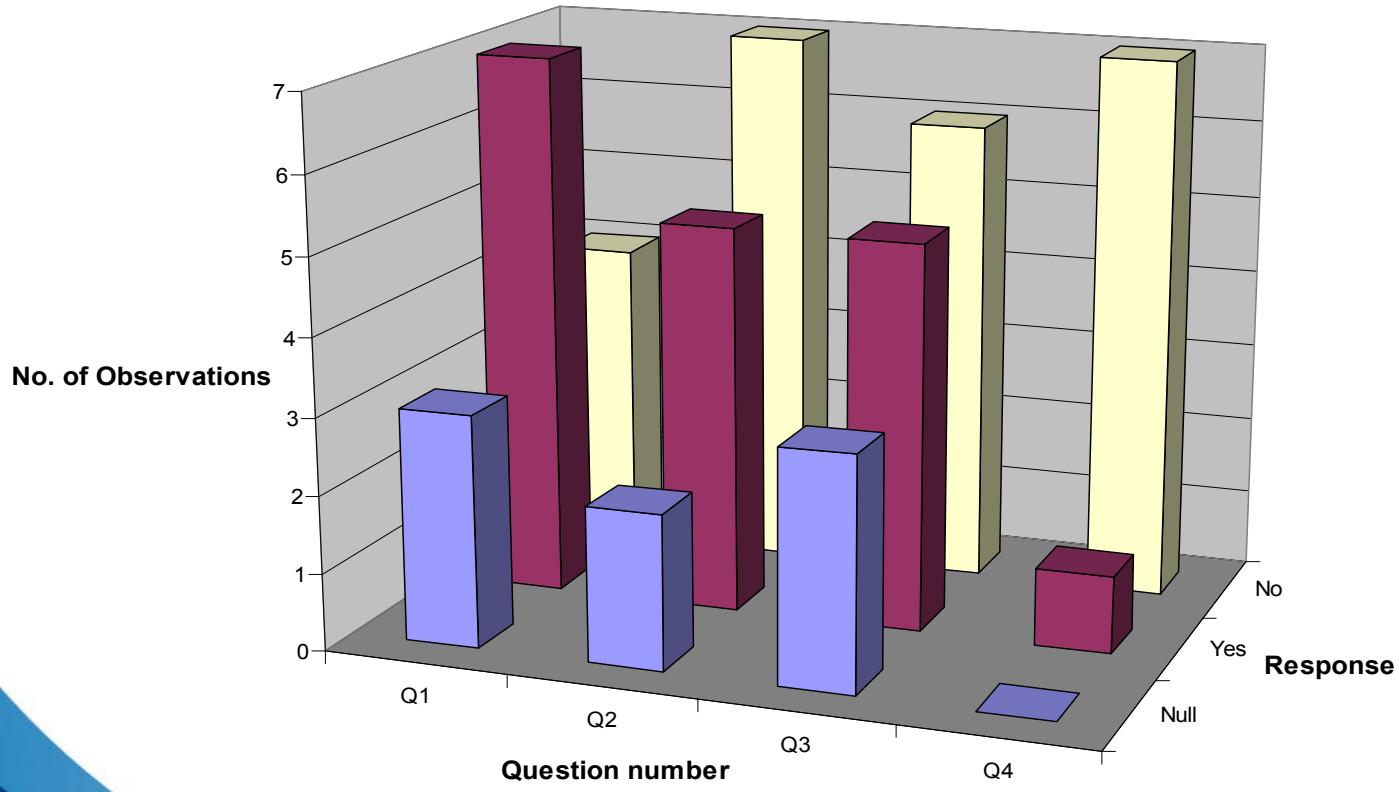
Analysis Methodology

- Players responded to three KM questionnaires through a web-based data collection application
- The collected data was analyzed by reviewing text records, deriving statistics where appropriate, and applying “content-based” analysis.
- Findings compared to general observations made during execution.

First Questionnaire

Four questions for the KM Players

- Fourteen respondents (6 NATO)
- All questions were text responses based upon Yes/No and explanation.
- Answers were categorized – Yes, No, and Null response.



First Questionnaire - Findings

- Question 1: Did the CIE portal structure support your EBP customer's requirements?
- Finding: The KM staff did feel that the portal structure supported the customer's requirements.

- Question 2: Were requirements from your EBP customers within the scope of KM capabilities ? Did your EBP customers ask you to provide products that KM could not provide?
- Finding: The KM staff did not feel they could satisfy the users requirements and that customers were requesting products that could not be provided.

First Questionnaire - Findings

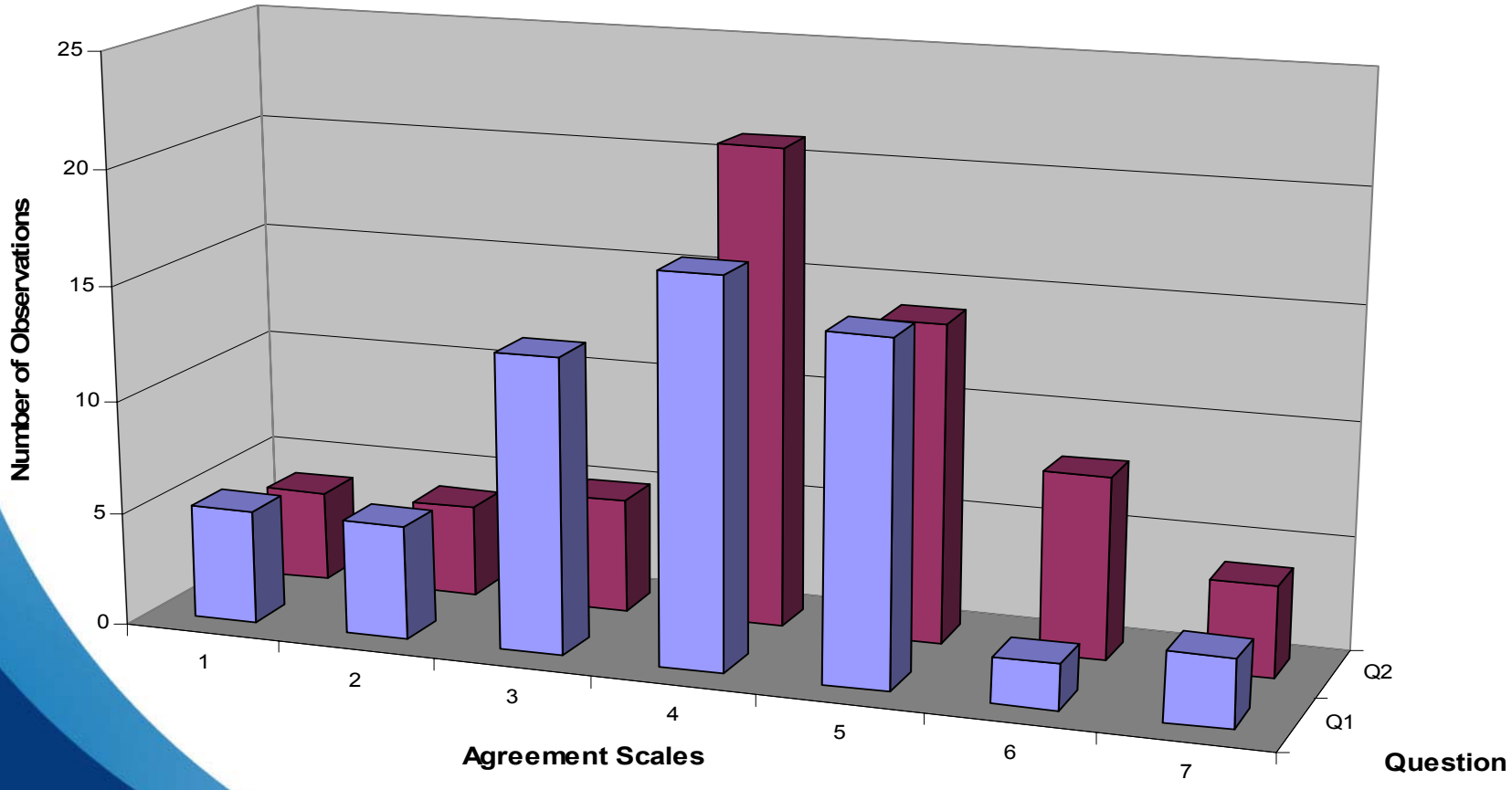
- Question 3: Did KM receive adequately defined requirements from its customers?
- Finding: Issue was not addressed in responses, so there was no finding.

- Question 4: Was the CKIMB able to coordinate requirements from different customers to provide consolidated solutions? Did KM have to satisfy customer requirements piecemeal or could KM come up with smart solutions that satisfied everybody?
- Finding: No, however, CKIMB did not function as planned in the experiment, so this question could not be assessed properly.

Second Questionnaire

Four questions for everyone except the KM players

- Sixty respondents (20 NATO)
- Two questions used response scales (strongly disagree to strongly agree)
- Two questions used Yes/No response or comments



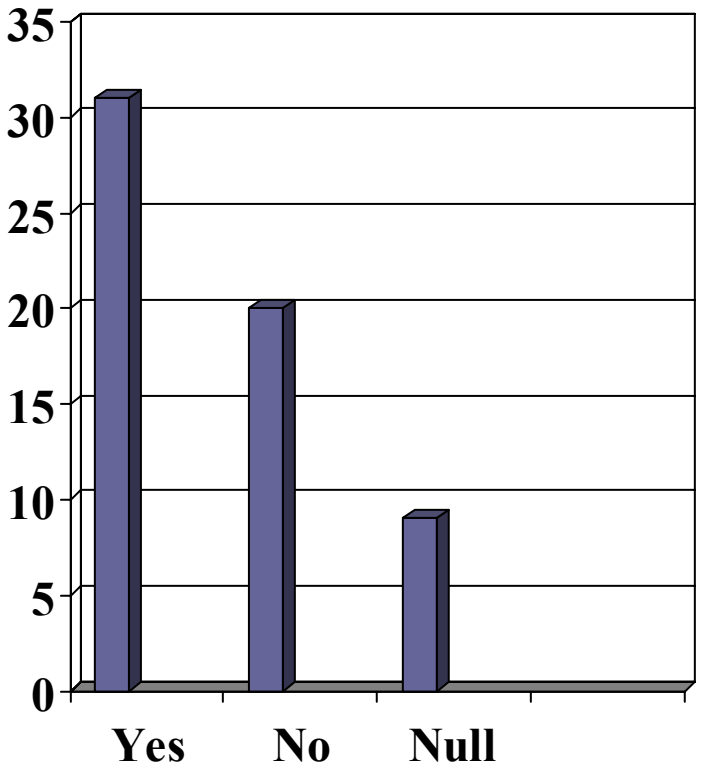
Second Questionnaire - Findings

- Question 1: KM provided simple and logical access to information you needed to do your job.
- Finding: The distribution showed that the group was almost neutral in their responses with a slight preference to disagree. The comments from the participants, however, provided useful feedback for improving the CIE.

- Question 2: KM representatives were proactive in identifying and satisfying your information needs.
- Finding: The distribution indicated that the group was almost neutral again but with a preference to agree. The players felt that the KM team was often under-resourced for the assigned tasks.

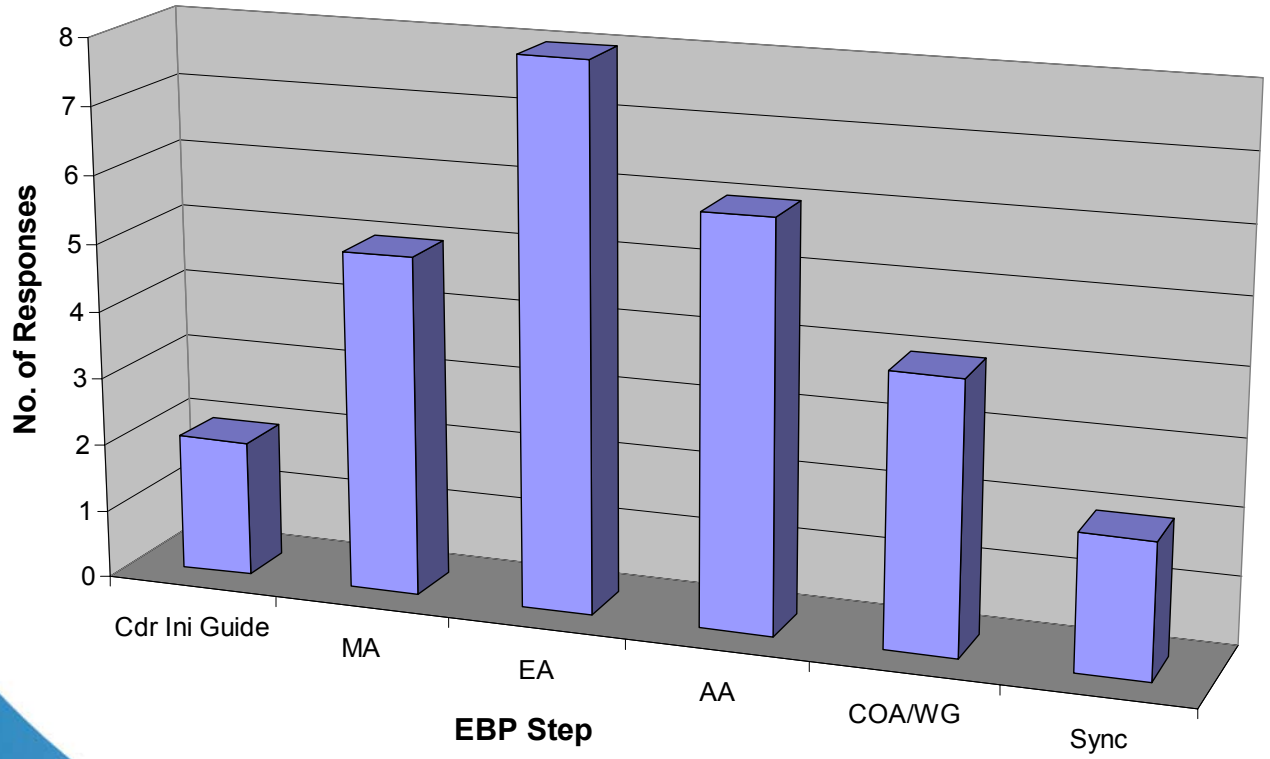
Second Questionnaire - Findings

- Question 3: Was the KM process responsive to dynamic and changing requirements of the EBP process?
- Finding: The players indicated that they thought the KM Process was responsive to the situation and met the requirements of the EBP process. The comments showed they thought the situation was not that dynamic.



Second Questionnaire - Findings

- Question 4: During what steps in the EBP process was KM most valuable and effective? How could it be improved?
- Finding: A rank analysis was performed on the occurrence of EBP steps in the responses. Players mentioned up to four steps in some cases. Effects Assessment, Action Risk Assessment and Mission Analysis were the top ranked process steps.



Third Questionnaire

One Question for All Players including the KM staff

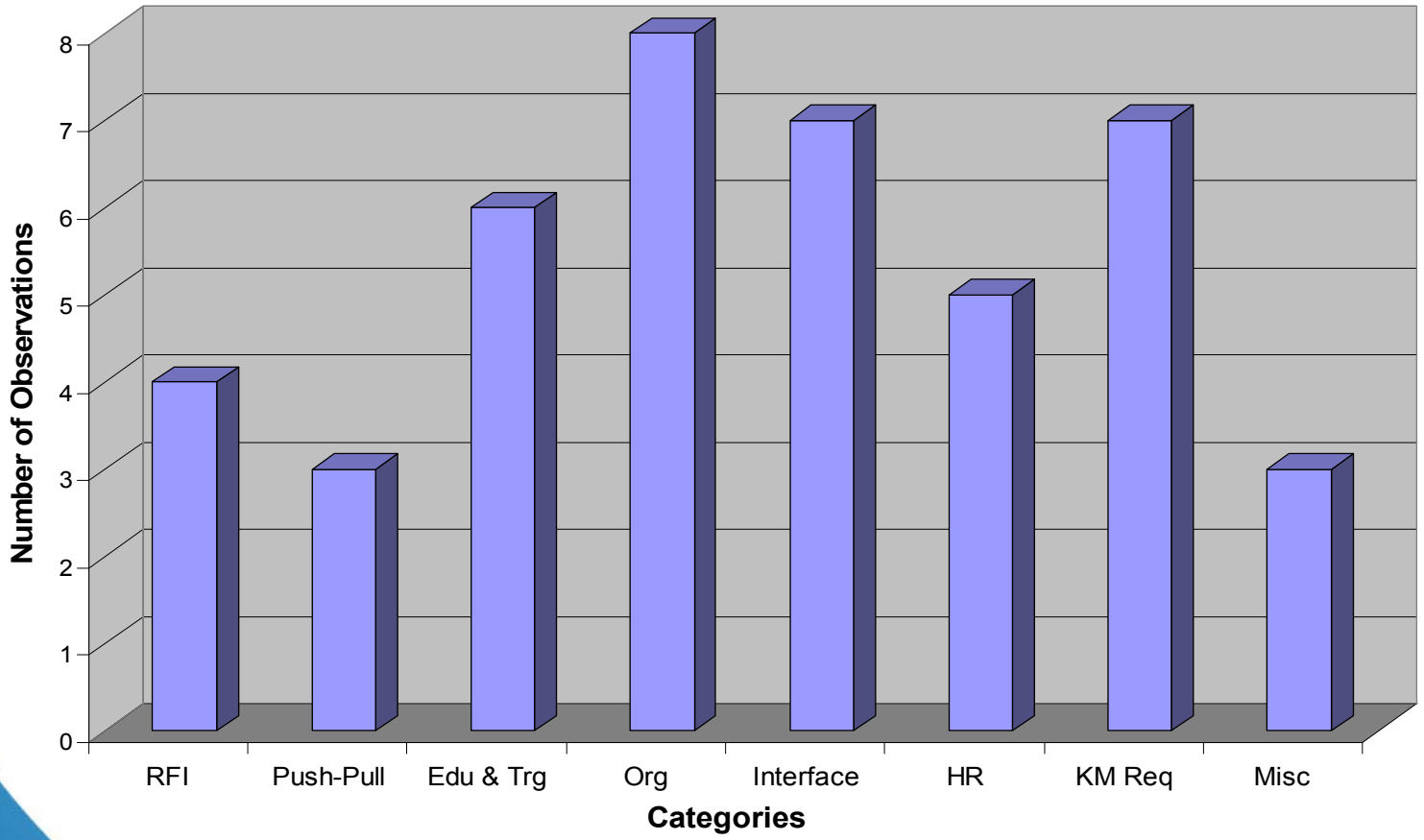
- Seventy-Four respondents (26 NATO)
- Yes/No responses plus comments
- Employed Content-Based analysis identifying 1 category per response

Question: Based on your experience in the experiment, what changes would you make to the KM process?

The following categories were identified:

- KR/RFI – improving the KR/RFI processes, attention to CCIR
- Push-Pull – comments regarding the implementation of either or both
- Edu & Trg – Education and training
- Org – Organization
- Interface – comments critical of the interface or related functions
- HR – comments calling for more KM staff
- KM Req – comments calling for definition of KM Process Requirements including development of better process for EBP and ONA

Third Questionnaire Responses by Category



Third Questionnaire - Findings

- Finding: Organization, Interface and KM Process Requirements were the leading categories. Responses were diverse, many valuable comments were collected.

- Sample comments from these categories are paraphrased here:
  - Organization: *Need a complete new structure, taking the specific needs of the committees and teams with the CFTHQ into consideration.*

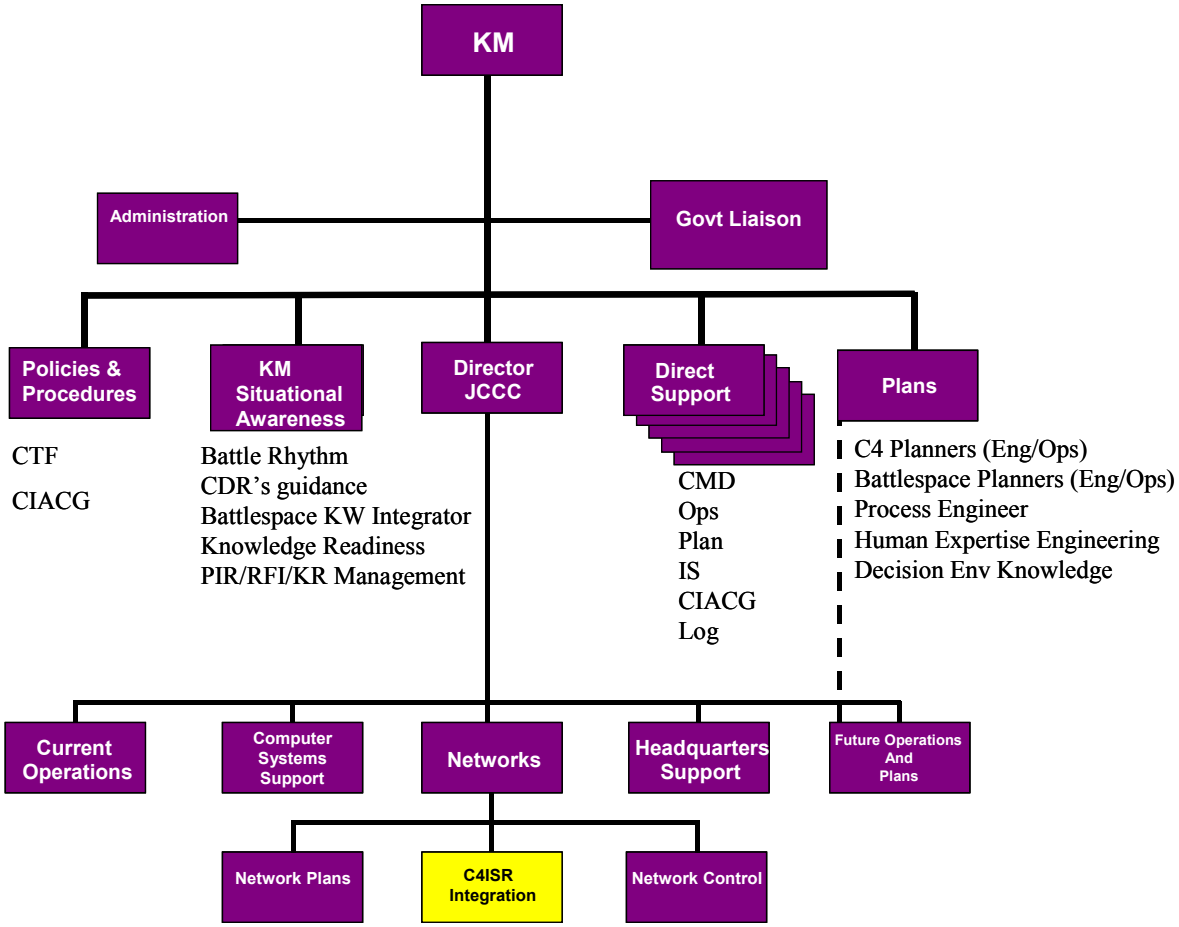
    Interface: *Information in the portal is not always visible to those who need to know; information pull does not give them effective access.*

    KM Process Requirements: *KM staff should work directly with planners on the products the latter produce in order to give the entire HQ a quick and easy access to all documents created in the EBP process.*

Observations from the KM Chief

HQ

Unit



Conclusions and Recommendations

Observations from surveys were consistent with observer/analyst perspectives and lead to the following conclusions:

- KM CONOPS (Process and Org in CTFHQ and CIE Business Rules) requires more development
- SJFHQ should have more KM staff with good integration into Plans, Ops and IS groups
- Need stronger participation with RFIs and KRs to stimulate KM process (CKIMB) in a future experiment
- Portal interface should be revised in a future experiment

Limited Objective Experiment on KM

- KM identified as subject for LOE in preparations for MNE 4
- Canada volunteered to host LOE
- Aim:

  Refine KM process, organization and technology from a Coalition Task Force perspective in preparation for MNE 4

Conceptual Tasks

Developed from MNE 3 Findings:

A. Review JFCOM KM CONOPS and CONEMP from a Coalition perspective and recommend refinements to meet MNE 4 Coalition Task Force KM requirements

B. Validate the CTFHQ KM team role, organizational structure, KM processes and procedures

C. Determine the proper technology to support the Coalition KM process and information displays in an optimum manner

Deliverables from the LOE

1. Develop MNE 4 Coalition KM Standard Operating Procedures (SOPs) and Tactics, Techniques and Procedures (TTPs)
2. Develop the MNE 4 KM Plan

Timeline:

- National KM Workshop (WS) - 12-14 May 2004 (Complete)
- Detailed Planning and Initial Research Work – Jun-Sep 2004
- KM WS 1 4 to 8 Oct 2004
- KM WS 2 24 to 28 Jan 2005
- KM LOE 18 to 29 Apr 2005
- Deliverables Complete: Aug 2005

Suggested Approach to KM LOE

1. Develop workflow process model for CTFHQ
2. Test design for KM in the CTFHQ through simulations and then seminars
3. Prepare preliminary SOPs and TTPs for KM process and organization
4. Define player Roles and their Information Requirements
5. Conduct a Human Factors study to revise the player Interfaces in the CIE (portal)
6. Conduct a Test & Evaluation event to validate the KM technologies, especially the player Interfaces
7. Conduct an Experiment or Demonstration to validate KM Process, Organization, and Technology.
8. Finalize the TTPs, SOPs, and KM Plan.

Questions?