Measuring Value: Community of Practice Life Cycle Metrics

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Fusing Knowledge Management with Lean Six Sigma, Project Management, Business Process Management, with Change Management to create Total Knowledge Solutions
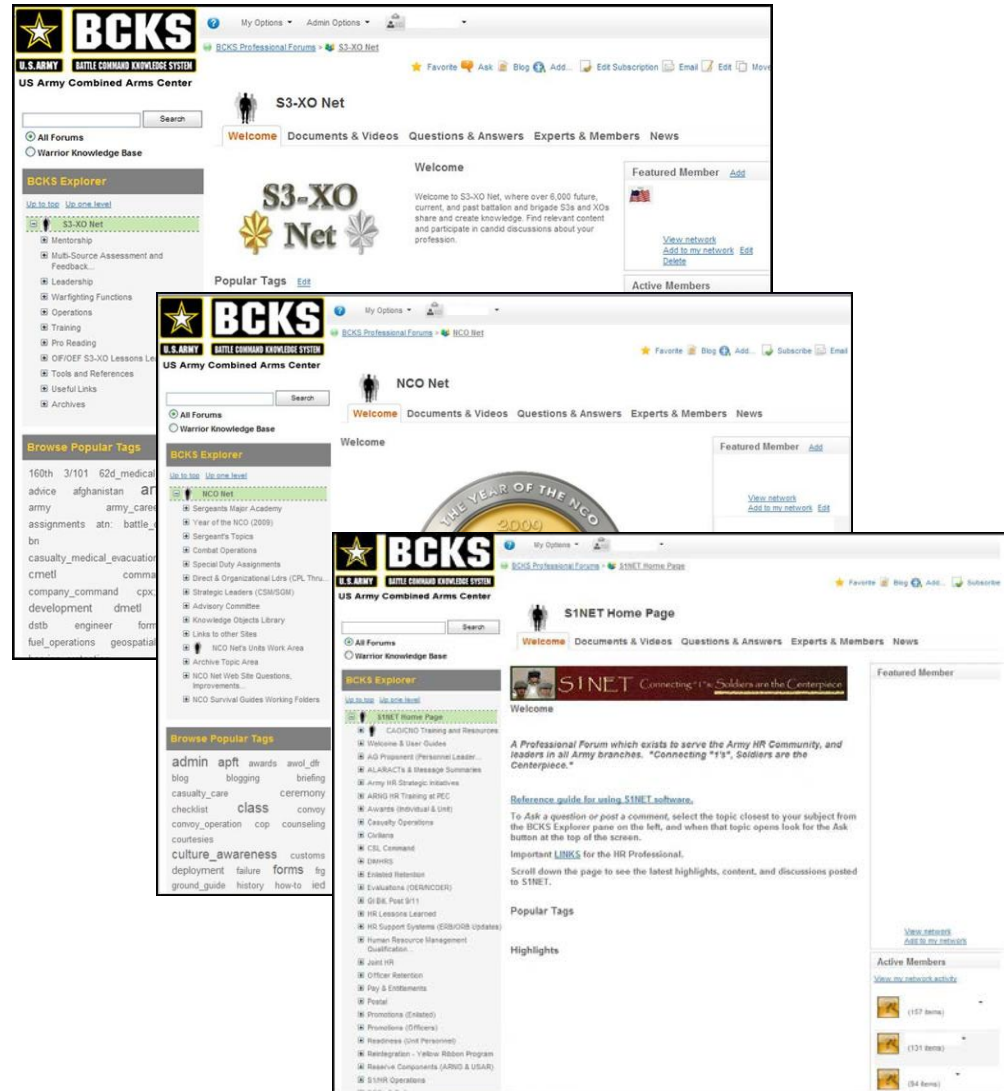
Agenda

- Communities studied

- Metrics of the CoP's Lifecycle

- Establishing a Basis for Measurement

- Understanding and Sustaining the Community

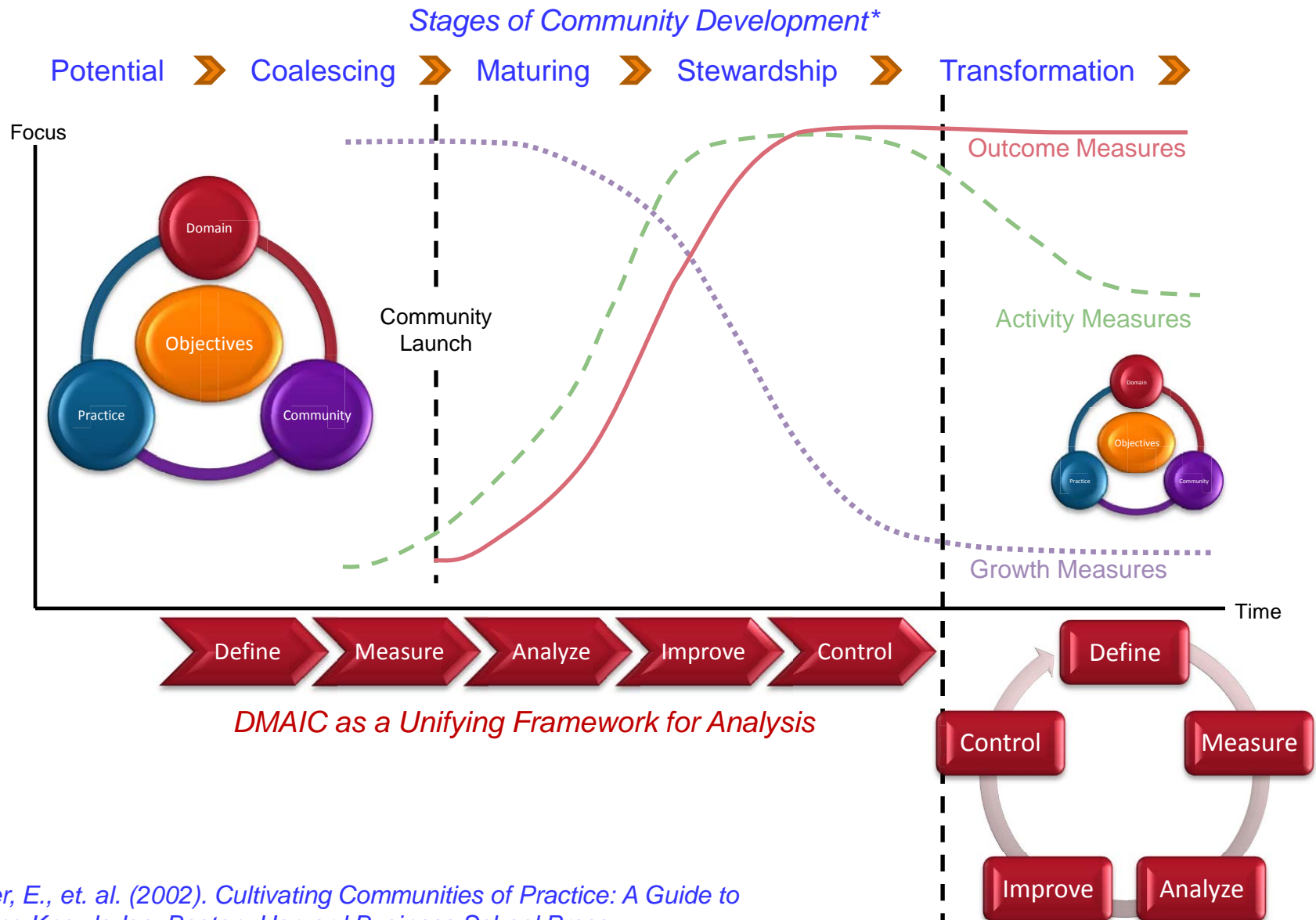- Outcome Measures – Getting to Impact

- Transforming the Community

How do we measure the right stuff?

Communities Studied

- US Army's Center for Army Lessons Learned hosts over 60 Communities of Practice (Professional Forums)

- Over 200,000 members

Metrics over a CoP's Lifecycle

Stages of Community Development

Potential ➤ Coalescing ➤ Maturing ➤ Stewardship ➤ Transformation ➤

Focus

Community Launch

Outcome Measures

Activity Measures

Growth Measures

Time

Define ➤ Measure ➤ Analyze ➤ Improve ➤ Control ➤

DMAIC as a Unifying Framework for Analysis

Define — Measure — Analyze — Improve — Control

Wenger, E., et. al. (2002). Cultivating Communities of Practice: A Guide to Managing Knowledge. Boston: Harvard Business School Press.

Establishing the Basis for Measurement

Potential ➤ Coalescing

Focus

Community Launch

- Domain
- Objectives
- Practice
- Community

Define

- Knowledge Assessment Determines need for a CoP: *Domain, Community and Practice*

- Establish CoP Objectives and connection to Organizational Objectives

Measure

- Identify benchmark communities

- Growth targets: membership, knowledge

- Activity targets: participation

Understanding and Sustaining the Community

Coalescing ❯ Maturing ❯ Stewardship ❯

Outcome Measures

Activity Measures

Community
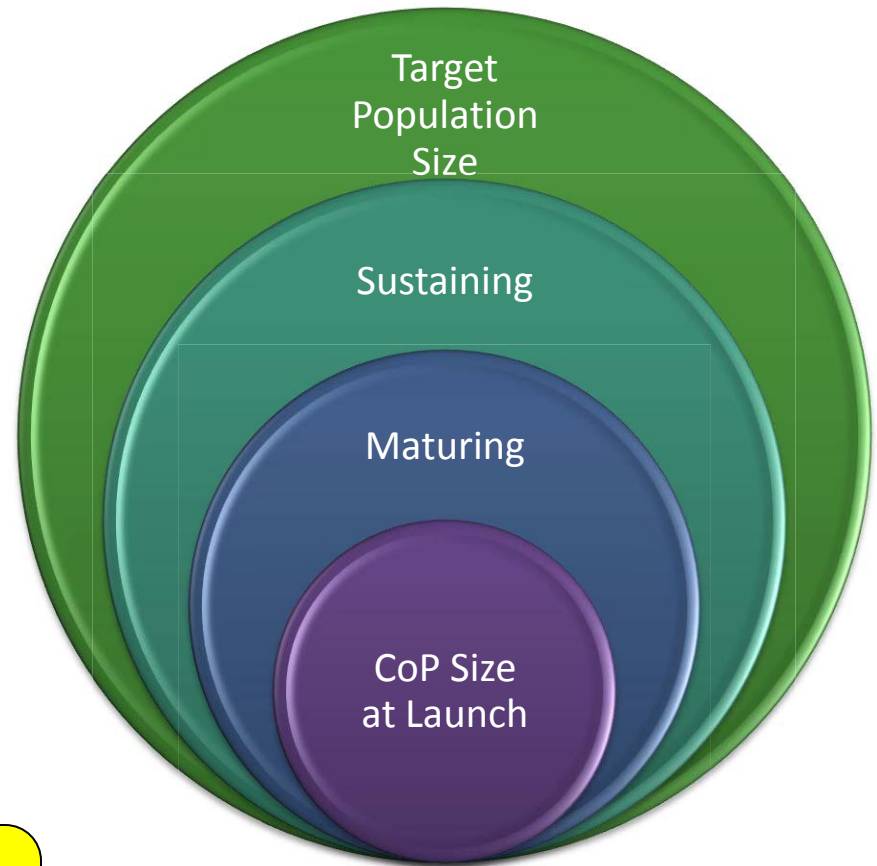Launch
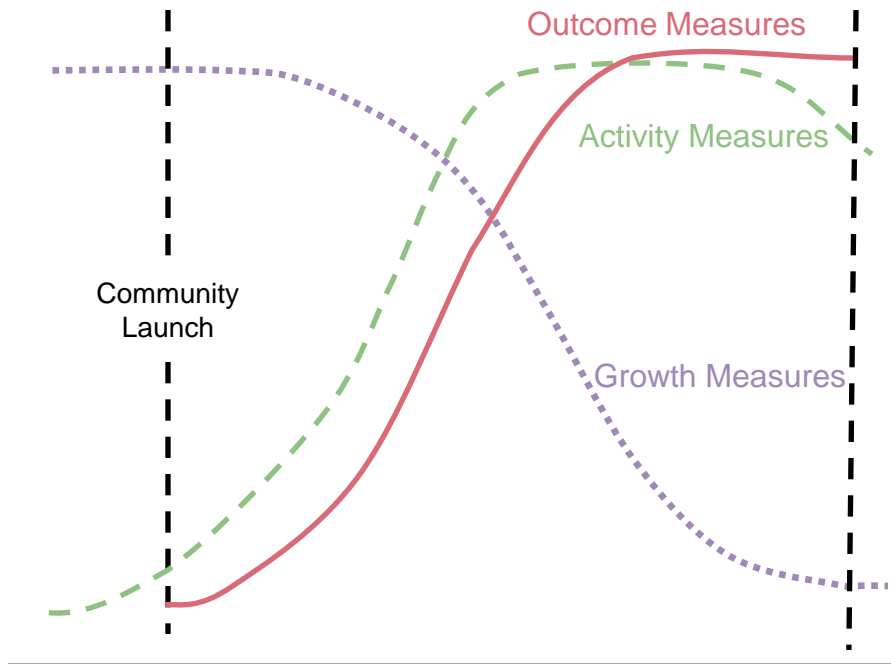
Growth Measures

Analyze

- Membership growth

- Activity

- Analyze root causes of behavior

Improve

- Align with Objectives

- Shape community behavior

Growth Measures

- Measures how the community has grown

- Member penetration

Membership chart showing values from Dec-07 to Dec-08, rising from about 2,500 to just over 6,000.

What's the impact on *Total* Potential Knowledge Transfer?

Target Population Size

Sustaining

Maturing

CoP Size at Launch

Analyze

Activity Measures

- Measures the amount of interaction among the members in the community

- An indicator of knowledge transfer – does not assess whether learning occurs

- Examples:
  - Replies to discussions (online, external emails, phone calls)
  - Documents uploaded or downloaded
  - Emailed pages from the forum
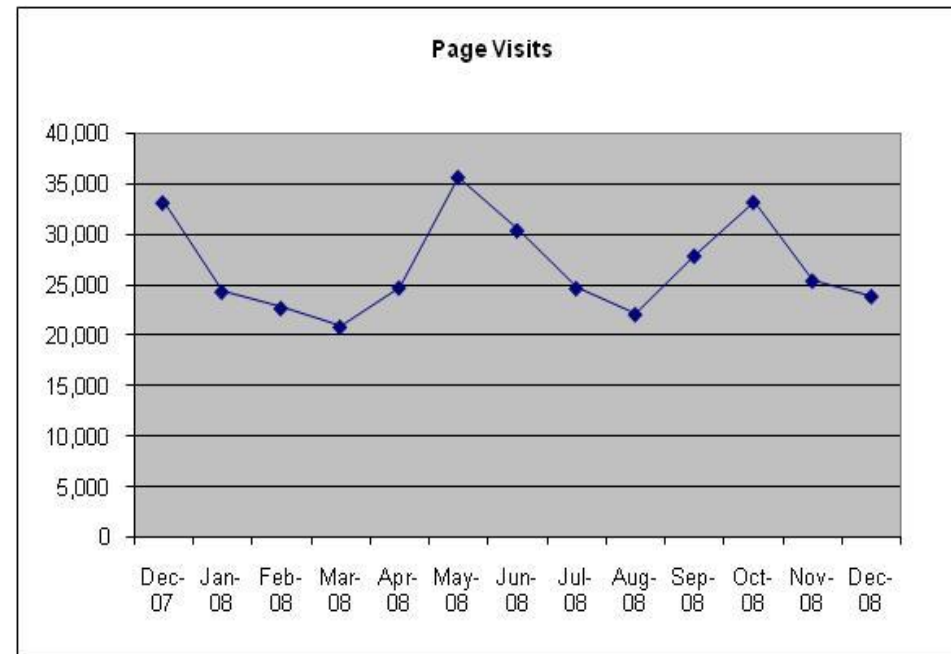
So How Do Things Look?

Analyze

Understanding Growth and Activity
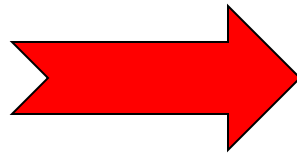
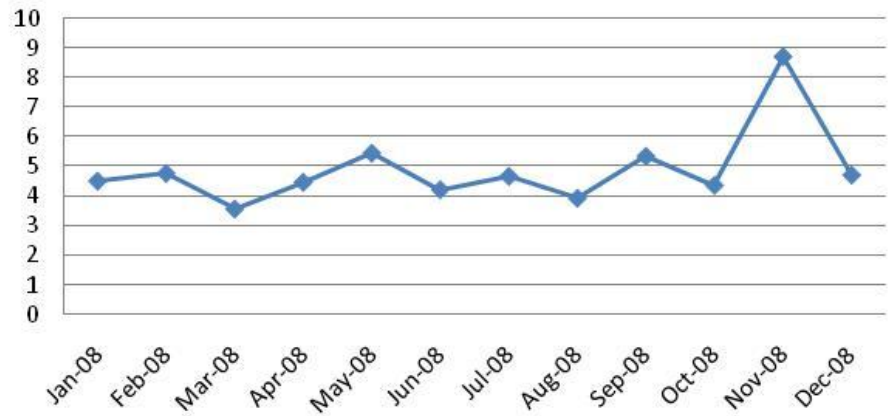**Indication of Potential Knowledge Transfer for _Each Member_**

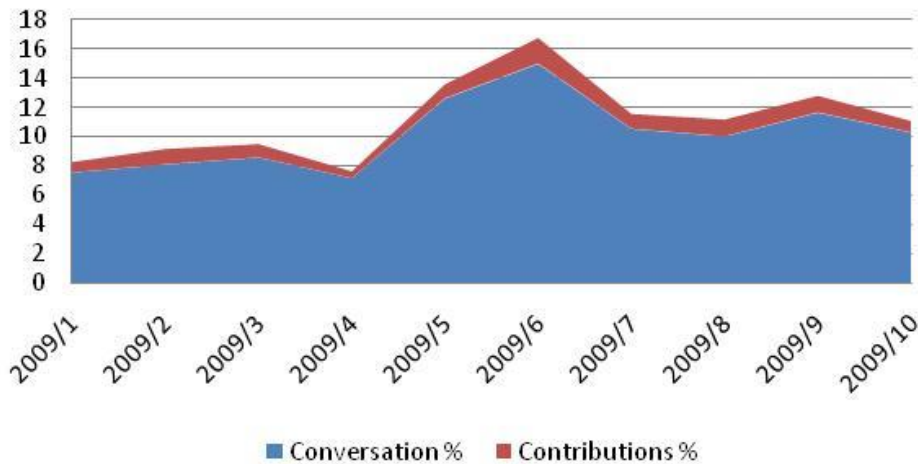**So How Do Things Look Now?**

Analyze

Analyzing Member Participation

Are our discussions vibrant?

Replies to Discussion Ratio
(Answers to Questions Ratio)

Are we meeting the community's needs?

Active Participation Rate
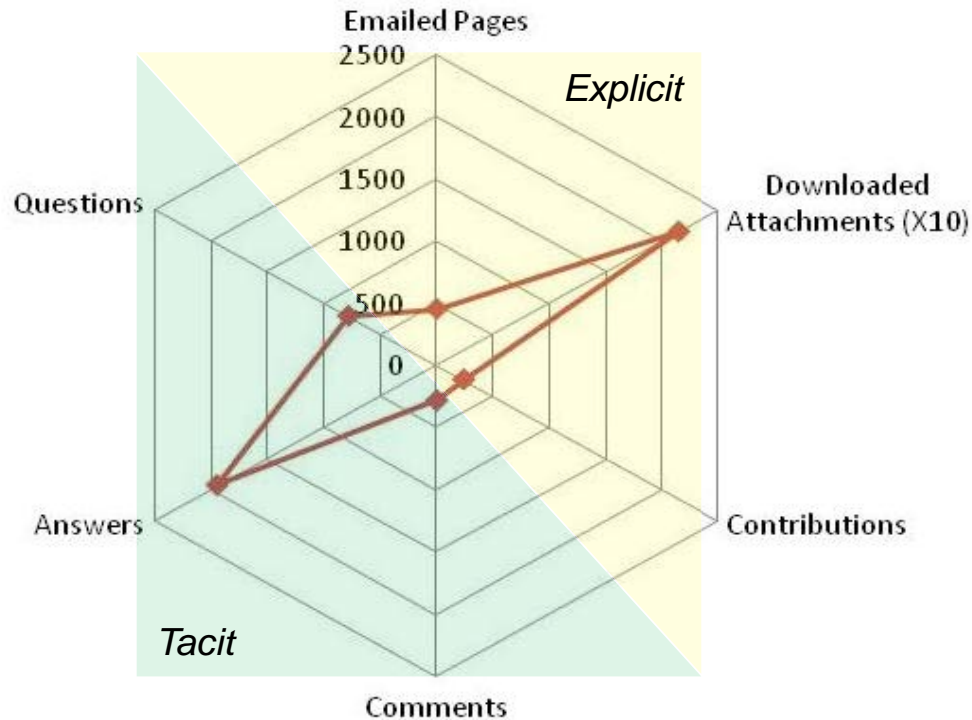
Conversation %   Contributions %

Active Participation Rate =

(Knowledge + Discussions + Replies) / Unique Visits

Analyze

Mapping Activity to Objectives

Warrant Officer Net Activity Map

Emailed Pages / Explicit / Downloaded Attachments (X10) / Questions / Answers / Tacit / Comments / Contributions

Charter
... connect, share ideas and experiences... With this in mind, please participate; learning from the experience of others, while sharing your expertise and knowledge.

Objective
...express professional, credible, and mature thoughts, opinions, and recommendations in reaching solutions...
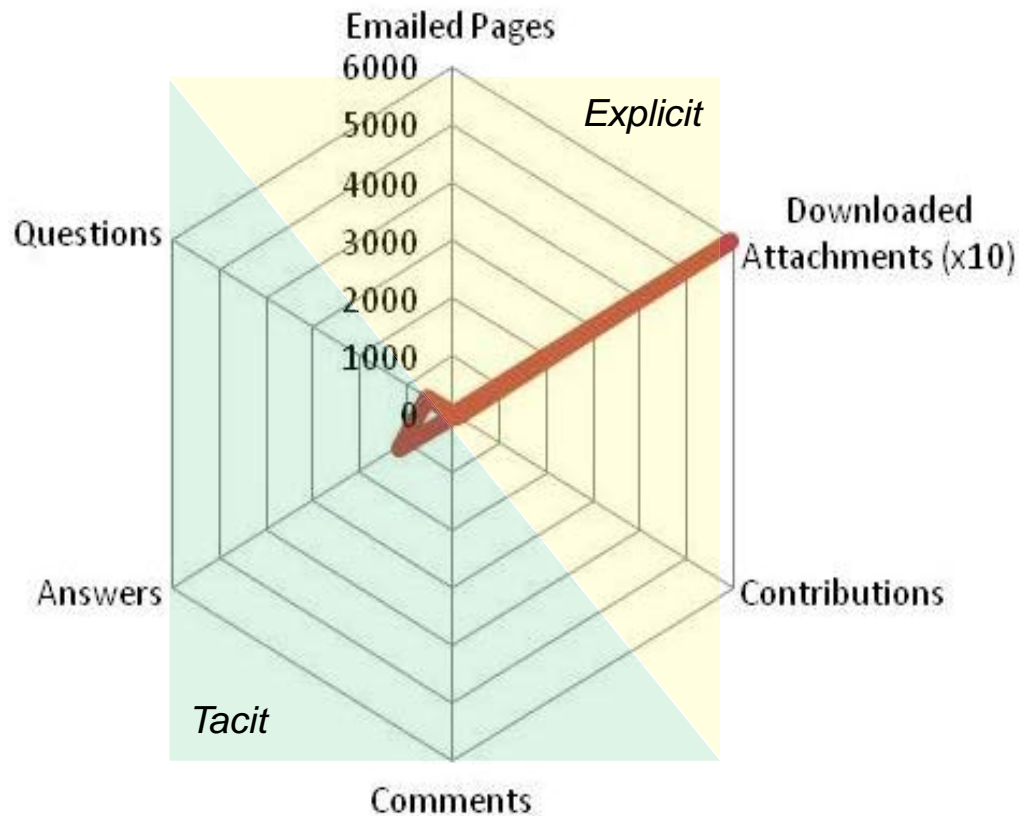
Are we in alignment with our organization?

Analyze   Improve

Mapping Activity to Objectives

S1 Net Actvity Map

Explicit / Tacit radar chart with axes: Emailed Pages (6000, 5000, 4000, 3000, 2000, 1000, 0), Downloaded Attachments (x10), Contributions, Comments, Answers, Questions
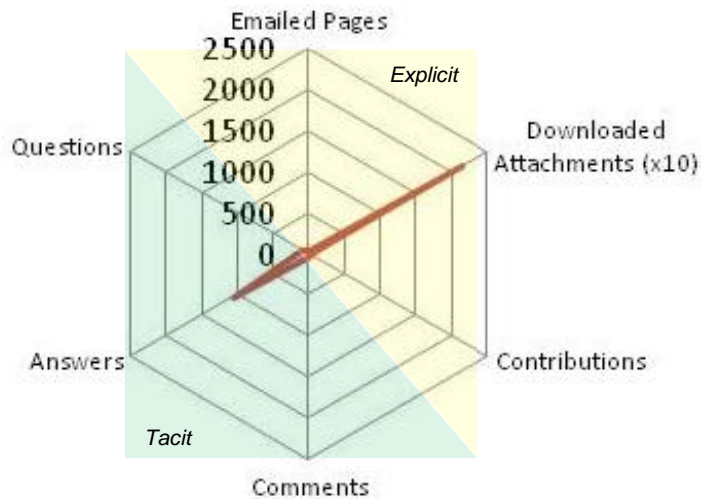
Objective

... to enable the secure **sharing of HR knowledge** ... by providing a mechanism for **top-down dissemination of knowledge** to the field, for individuals to keep each other current in the developments of a shared discipline through **horizontal communication**, and a means for the **institutional force to obtain feedback from the field** ...
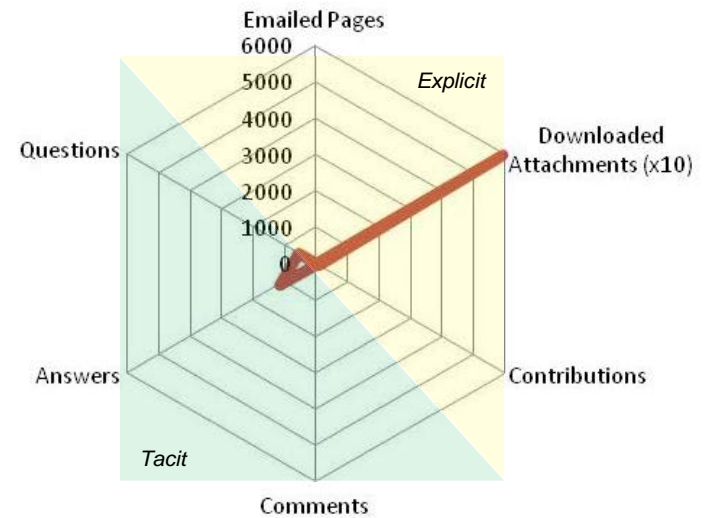
Are we alignment?

Analyze → Improve

Using Combinations of Metrics to Complete the Story

Community Behavior: Root Causes

Management

- Involvement in topics and discussions
- Directives or incentives to participate

Man (forum support team)

- Engagement of Topic Leads in discussions
- Professional conduct standards maintained
- Response of SMEs to member requests

Method (facilitator actions)

- Membership Drives
- Community Events
- Member Communications

Change in Participation

Measurement and Environment

- Weekends or Holidays during the period
- Operational Tempo
- Environmental impacts -weather

Machine (online presence)

- CoP layout
- Taxonomy and Content
- CoP functionality

Material (supporting IT)

- Network Connectivity
- Access to Computers

Analyze   Improve   Control

Shaping Community Behavior
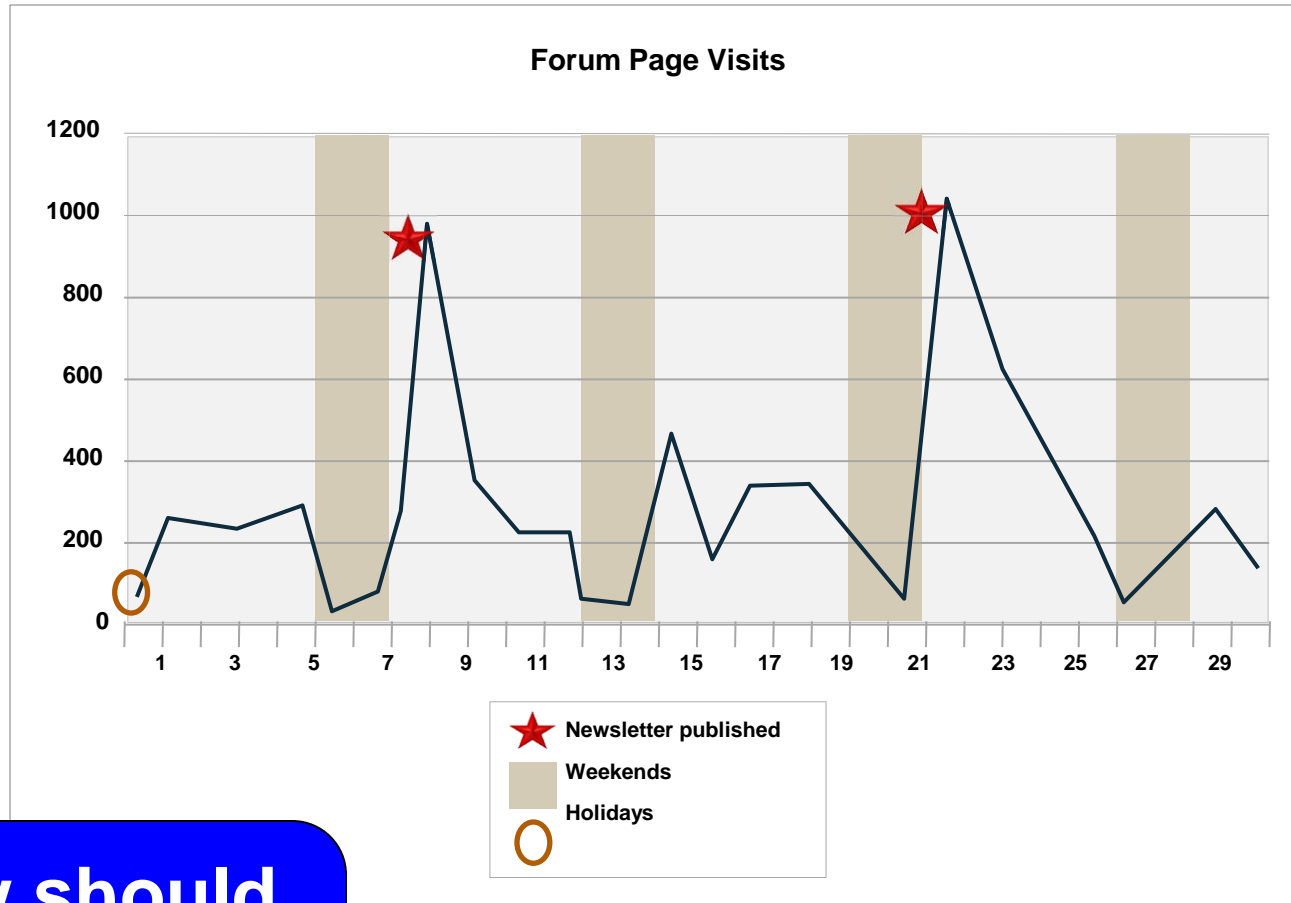
How should we tailor our effort?
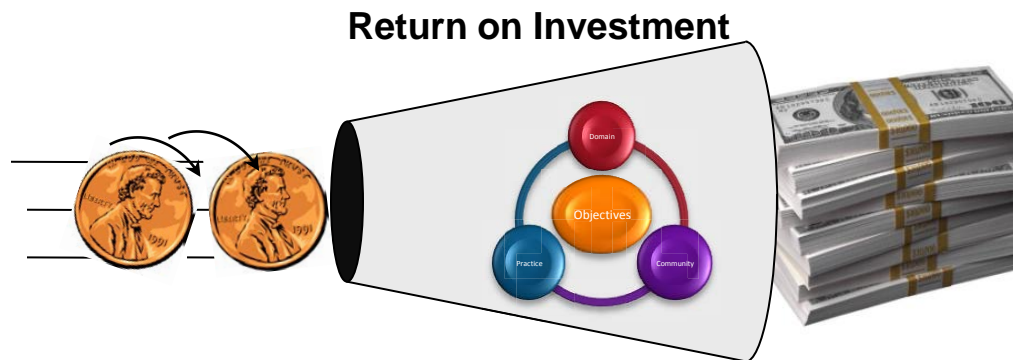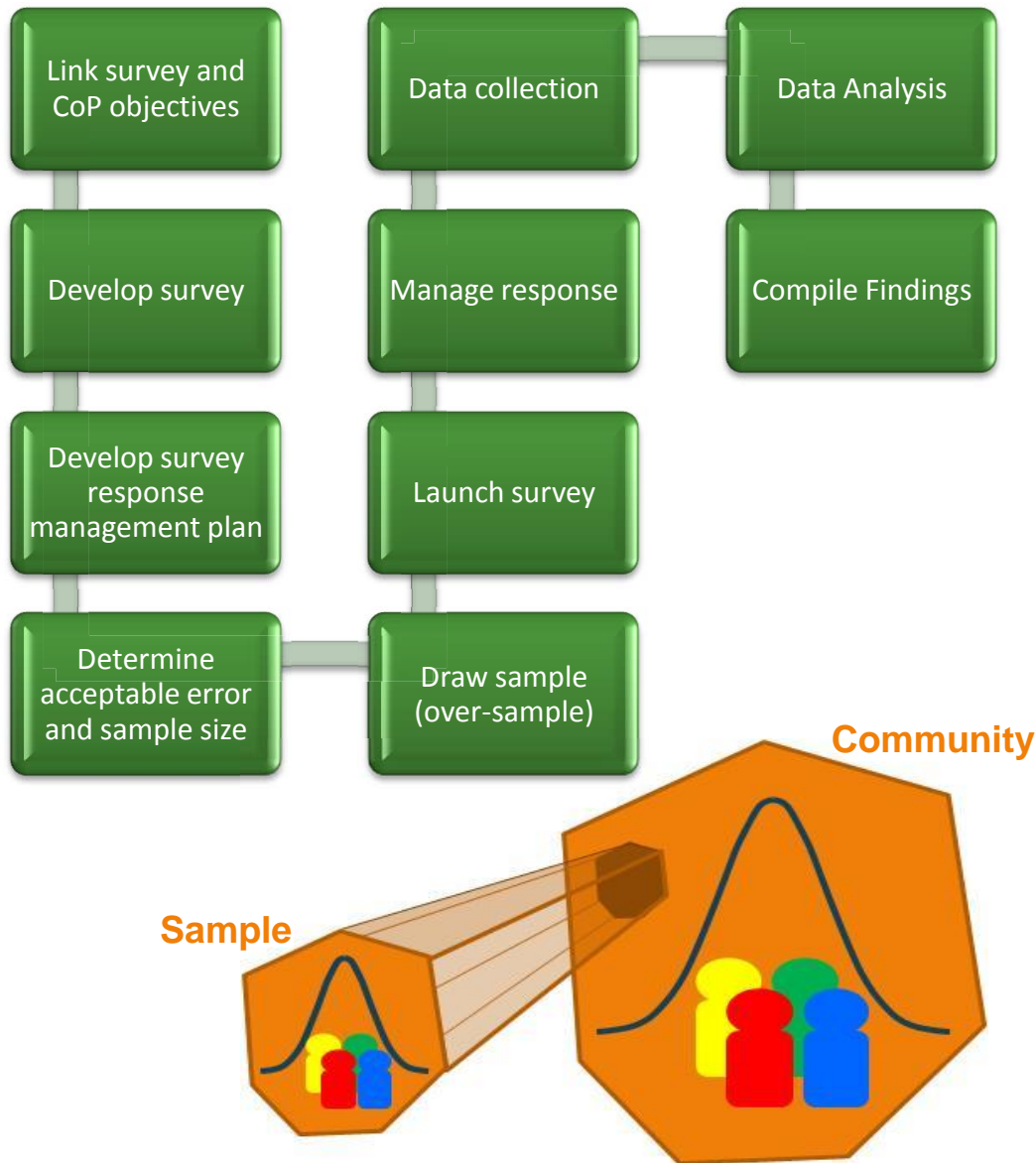
Outcome Measures

- "Determine the impact of the KM project on the organization, help determine if the knowledge transfer processes are working to create a more effective environment… often the hardest measures to evaluate."*

- Shows **impact on the organization** – the "So What"

- Ideally shows how organizational or individual efficiency and effectiveness are improved

- Often assessed through **proxy measures**:
  - Time, money or lives saved
  - Injuries prevented
  - Issues to action: changes to the way we do business

Return on Investment

Improve   Control

Estimating CoP Return on Investment

Link survey and CoP objectives

Develop survey

Develop survey response management plan

Determine acceptable error and sample size

Data collection

Manage response

Launch survey

Draw sample (over-sample)

Data Analysis

Compile Findings

Community

Sample

- Survey to ascertain member perceived value of the Community
  - Quantifiable terms: Time, Money, Lives, etc.
  - Rigorous survey method for:
    - Sampling strategy
    - Sampling size
    - Non-response
    - Bias
    - Data analysis

- Can be paired with a measure of respondent "confidence" to produce conservative results

- Pair quantitative results with supporting anecdotes

Improve **Control**

Providing Context: Personalizing the Numbers
Lives, Dollars, Time Saved

"…searched and found a Ranger Handbook translated …In finding this translation I didn't need to have it translated by an Interpreted **saving my detachment almost $1,000**."

"**The S1-Net has saved countless hours for me as a 1SG**. Having one source to find the information I need allows me to help Soldiers with their issues which has led to fewer problems and reduced stress within my unit. **S-1 Net has helped me to be a better leader for my Soldiers**."

"I used the quick notification of the Army Combat Helmet recall and forwarded to my unit supply sergeant to notify Soldiers of my unit to check their helmets for the recalled stock numbers. **No doubt that has saved lives**."

Improve   Control

Community Helps in SOP Development

**Discussion posted on S3-XO Net on 26 Feb 08**

Convoy SOP

Looking for a comprehensive tested tactical convoy SOP. I have all the CALL TTPs etc. looking for a unit developed convoy SOP in preparations for OIF. Did the MiTT thing….don't have the time to write my own.

MAJ
Aviation Intermediate Maintenance Company Commander
Fort Drum, NY

Respondents	
LTC	1
MAJ	3

Action

- **Four replies to the discussion on the forum**
  - **Directed to other products on the forum**
  - **One directing to existing products on SIPR**
  - **One requesting SIPR email to send classified SOP**

- **Member received several emails and telephone calls including. The community sent:**
  - **Three unit developed SOPs**
  - **Extracts from COIN TACSOPs**
  - **CLP SOP**
  - **Convoy Operations Training Reference Cards**
  - **CALL's Tactical Convoy Operations TTP Handbook**
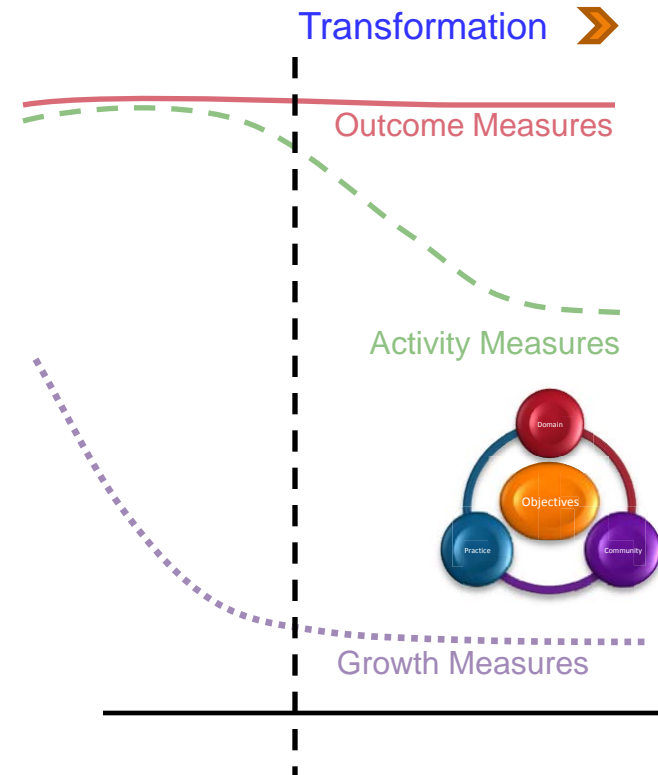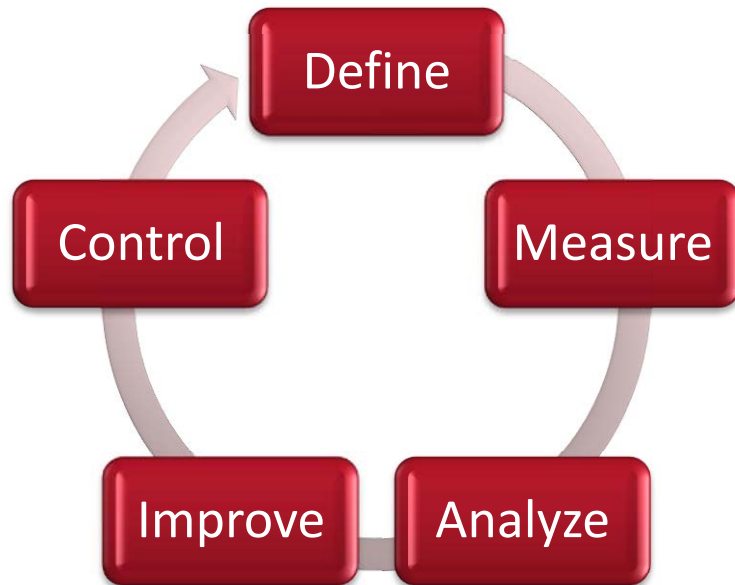
Output
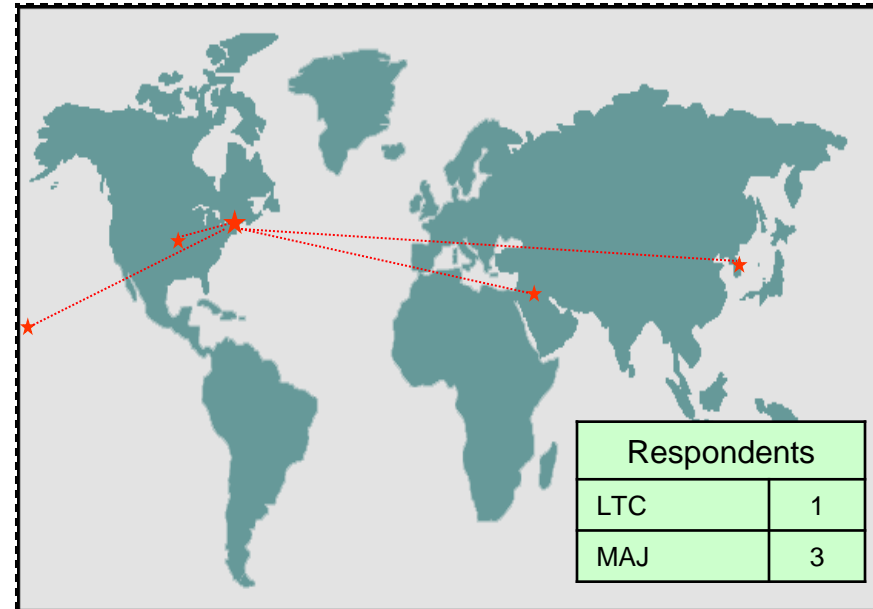
Impact

- **Member is developing a new Convoy SOP for his unit largely based on community input**

- **To date, member estimates it has saved him 12-15 hours of time in developing this handbook (approximately $400-$500 in labor costs)**

Outcome

Improve **Control**

Transforming the Community

Has Domain, Community, and Practice remained relevant?
Are the Outcomes still supporting the Objectives?
How do we change our measures to address the changing CoP?

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Questions?

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