

EVALUATION FEASIBILITY AND FRAMEWORK DEVELOPMENT:
SUMMARY OF PROCESSES, RESULTS AND RECOMMENDATIONS

FINAL REPORT

October 6, 2011

PREPARED FOR

NATIONAL CANCER INSTITUTE
CENTER TO REDUCE CANCER HEALTH DISPARITIES

BY

CONCEPT SYSTEMS, INCORPORATED

EVALUATION FEASIBILITY AND FRAMEWORK DEVELOPMENT:
SUMMARY OF PROCESSES, RESULTS AND RECOMMENDATIONS

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
Program Background	3
Purpose and Objectives of the Study	3
Study Design and Methods	3
Key Results	4
Utilization, Observations and Recommendations	5
UTILIZATION	5
RECOMMENDATIONS	6
BACKGROUND, PURPOSE AND DESIRED OUTCOMES	7
PROJECT DESIGN AND METHODOLOGY	8
Concept Mapping for Framework Development	8
ESTABLISHING THE FOCUS	9
IDENTIFY THE PARTICIPANTS	9
IDEA GENERATION	9
IDEA SYNTHESIS.....	10
STRUCTURING THE IDEAS.....	10
COMPUTING THE MAPS	11
MAP INTERPRETATION	11
Logic Model Development	12
Regional Virtual Meetings	12
RESULTS	14
Concept Mapping Results	14
CONCEPT MAPS.....	14
PATTERN MATCHES	17

GO-ZONES	22
Logic Model Results	24
Regional Virtual Meetings Results	26
GENERAL FEEDBACK	27
UTILIZATION OF RESULTS	29
Guiding the Development of Short Term and Intermediate Outcomes	29
POTENTIAL SHORT-TERM OUTCOMES SUGGETED BY THE MODEL	30
POTENTIAL INTERMEDIATE OUTCOMES SUGGESTED BY THE MODEL.....	30
Considerations for UTILIZATION at the Regional Level	31
Considerations for UTILIZATION at the Systems Level.....	31
OBSERVATIONS AND RECOMMENDATIONS FOR NEXT STEPS	33
TABLE OF FIGURES	
Figure 1. Point Map, indicating the array of all statements and their relationship to each other.....	15
Figure 2. Point Cluster Map, showing point values groups within statement clusters.	16
Figure 3. Labeled Concept Map. A nine-cluster concept map indicating the main topics, or concepts, that contain the 93 ideas that make up the content of the project results.....	17
Figure 4. Importance and Feasibility Relative Pattern Match: All Participants.	18
Figure 5. Importance Pattern Match: Sub Group Comparison by Roles.	19
Figure 6. Importance Pattern Match: Sub Group Comparisons by Regions.....	210
Figure 7. Example Go-Zone Analysis	22

EVALUATION FEASIBILITY AND FRAMEWORK DEVELOPMENT: SUMMARY OF PROCESSES, RESULTS AND RECOMMENDATIONS

EXECUTIVE SUMMARY

PROGRAM BACKGROUND

The Transdisciplinary Geographical Management Program (GMaP) is a program of the National Cancer Institute's Center to Reduce Cancer Health Disparities (CRCHD). Developed in 2009 with funding through the American Recovery and Reinvestment Act (ARRA), the GMaP network is an integrated, comprehensive approach to improving and advancing cancer health disparities research, and enabling the research to inform and improve practice. Objectives of the GMaP network are to foster collaboration, cooperation, information- and resource-sharing, and capacity-building among cancer health disparities researchers, trainees, outreach workers, and organizations; and the institutions that conduct research and training.

PURPOSE AND OBJECTIVES OF THE STUDY

Recognizing the role of evaluation in multi-site, multi-member networks, program leadership at the Center to Reduce Cancer Health Disparities (CRCHD), also referred to as the Center, initiated this project in September 2010 to consider cross-region and integrated program evaluation for GMaP.

The purposes of this concept mapping and stakeholder engagement initiative were to:

- Identify and establish criteria for a comprehensive, timely and useful outcome evaluation *framework* for the regions and the network at large;
- Assess the *feasibility* of conducting outcome evaluation in the context of the regional structures, and for the program in general.

STUDY DESIGN AND METHODS

The study design included methodologies that, taken together, supported issues of identification, prioritization, pilot testing and assessment of the regions' current views on, and readiness to engage in, a system-wide evaluation approach. The methods used in the project include:

- Concept mapping;
- Evaluation process logic model development;
- Pilot presentations of the above to each region;
- Integration of the resulting feedback.

Concept mapping is a mixed methods planning and evaluation approach that integrates familiar qualitative group processes (brainstorming, categorizing ideas, and assigning value ratings) with multivariate statistical analyses.

The concept mapping process included:

- Project focus development. The focus prompt was “*A specific thing for the network to do or include that will lead to measurable reduction in cancer health disparities is...*”
- Participant invitation and communication. Invited participants included members of the NCI Planning Group, Regional Coordinators and Evaluation Task Force Leads (N=25) and an extended group of individuals from the GMaP regions (N=103).
- Idea generation. At the September 29, 2010 GMaP Summit, participants contributed their input on specific issues that are relevant toward leading to a measurable reduction in cancer health disparities. Additionally, during the period of February 14, 2011 through March 4, 2011, stakeholders contributed content electronically, via a dedicated project website.
- Organizing and rating. Participants provided their individual view of the relationship of the generated ideas, and provided feedback on the *importance* and *feasibility* of each element.
- Analysis. The data analysis yielded a series of interpretable maps, graphs and reports that the Planning Group reviewed and finalized.
- Use. The concept map is a framework depicting the program elements that could lead to a measurable reduction in cancer health disparities.

The process/logic model was developed from the concept map framework. The draft was reviewed and refined with Program Staff to ensure its relevance for the purposes of the program.

The regional virtual meetings were conducted between June 14, 2011 and June 30, 2011 to pilot the conceptual framework and logic model for utility in each of the regions. The regional virtual meeting agendas were standardized, and used the concept map framework, each region’s specific ratings feedback and the logic model to inform and seek feedback from the regions on the model’s potential utility.

KEY RESULTS

The concept mapping methodology produces a series of interrelated maps. The cluster map upon which the logic model is based identified the following areas of emphasis: *Community Engagement, Partnership Coordination, Transdisciplinary Integration, Science Management, Funding and Sustainability, Research Assets, Capacity Building, Culturally-based Clinical and Specimen Research, and Communication and Dissemination.*

The logic model was developed from the concept map results, integrating aspects of the map into three major “regions” that comprise an effective evaluation construct for the GMaP *Structural and Research Readiness, Stakeholders and Locales, and Research Processes and Activities.* Each element of the logic model corresponds to a component or cluster obtained from the concept mapping analysis (see Figure 8). The logic model was used to explore, refine and confirm the results with the Planning Group and Program Directors, and for the regional virtual meetings agenda.

Regional virtual meetings yielded important feedback for the program to take into account. Discussion from participants from each region included commentary on their status relative to evaluation planning,

the degree to which the concept map and ratings accurately reflected that region's perspective on integrated program evaluation, and the region's opinions on the utility and potential of an integrated evaluation model for the program, as described in the logic model. A summary of the six meetings indicates the variance among the regions, which provides the program with feedback on the regions' common perspectives and differences related to evaluation.

UTILIZATION, OBSERVATIONS AND RECOMMENDATIONS

The project's objectives included the development of an integrated evaluation framework for GMaP, including a logic model that reflects the priorities of the regions. The project has provided this, and the utility of these products is just beginning to be explored. Based on the process logic model and the suggested outcomes to be measured, it is possible to specify the measures and analytic approaches that can be used to gather comprehensive evaluation data for a system of evaluation.

A key finding of this feasibility assessment was the gap in the specification of short-term and intermediate outcomes of the GMaP Initiative. Nonetheless, because of the clear linkage between program elements and the conceptual tie to the ultimate measure of success of the system of research, it is or will be possible to specify the short-term and intermediate outcomes.

The project was also intended to provide feedback on feasibility to conduct integrated evaluation within the program, linking regions in a single evaluation system. Each region indicates that it is actively developing or already has stable evaluation initiatives. But the level of engagement, consideration of the utility of the model by each region and the variance in regional feedback indicate that regions are not yet, as a collective of science teams, prepared to engage in the development of an integrated evaluation approach. Structural and program capacity exists within the regions, but there does not yet exist a common acceptance or expectation of value of a system-wide evaluation framework. This position varies from region to region, naturally. At this time, no common expectation of the value of integrating evaluation efforts exists.

UTILIZATION

As mentioned above, the feasibility and utility of a comprehensive model for the regions varies given the regions' different stages of planning and operational maturity. Even so, the flexibility of the model enables each region to use it to design an approach specific to their context, yet maintain some consistency with the systems level. At the system level, the Center can use the results to construct an internal integrated model for GMaP, connecting current regional evaluation plans and needs to identify short term and intermediate outcomes for the purposes of the program's planning and outcome evaluation. This will also allow for the development of a useful set of common evaluation questions that the Center may want to integrate into their program planning and evaluation expectations for the regions.

RECOMMENDATIONS

The framework and logic model will be effective in helping GMaP to: a) operationalize outcomes and develop measurement strategies, b) align implementation and evaluation processes across the system, and c) further plan for and prioritize program development and evaluation efforts that will maximize the utility of the cross-network input. Prior to developing measures, metrics and timelines for evaluation, it would be useful for the program to seek additional feedback from regions on the plan.

This report also provides a useful window into the status and priorities of the regions relative to the feasibility of conducting systematic evaluation. To lead to the utilization suggested above, we recommend that the program review the results, identifying commonalities and variations regarding evaluation among the regions; engage leadership and evaluation staff in regions in assessing the applicability of the evaluation framework; and prioritize the efforts of the cross-regional evaluation group, using regional evaluation expertise throughout the system as a formal mechanism for more systematic planning and integration of evaluation.

Once the program has supported the regions in understanding and contributing to an integrated evaluation approach, the results will yield a stronger adoption of systematic approaches to evaluation, including an emphasis on team science and evaluation, and will lead to concrete tools to support the work of the GMaP initiative.

BACKGROUND, PURPOSE AND DESIRED OUTCOMES

The Center to Reduce Cancer Health Disparities (CRCHD) is the home of the National Cancer Institute's pilot program: Transdisciplinary Geographic Management Program (GMaP). Launched in 2009, the program is based on the development of a systematic network approach to cancer health disparities strategy, intended to "build critical regional networks for the support and efficient management of cancer health disparities research, training and capacity."¹

The purposes of the concept mapping and stakeholder engagement initiative were to:

- Identify and establish criteria for a comprehensive, timely and useful outcome evaluation *framework* for the regions and the network at large;
- Assess the *feasibility* of conducting outcome evaluation in the context of the regional structures, and for the program in general.

The institutional objectives of the project, in addition to the delivery of the framework and feasibility assessments, were to strengthen collaboration and cooperation among the member regions and their competitive researchers, communities and organizations, resulting in more efficient management and greater resource-sharing within these hubs and across the network.

The feasibility study and design framework results took into account the range of organizational and research priorities from region to region, considered the common elements upon which the regions, as members of a network, may structure an outcome evaluation, and identified each region's position relative to evaluation capacity *as an integrated system across regions*.

Results included:

- An integrated conceptual framework for NCI's GMaP pilot initiative evaluation needs and the elements of an evaluation system for the NCI's GMaP program.
- A logic model to serve as the foundation for the evaluation plan and measurement development, which captures stakeholders' assumptions about evaluation in the regions' contexts.
- Identification of the conceptual, operational and the measurement domains to help anchor an overall evaluation plan.
- The results of a pretest in the form of individual reviews with each region, intended to determine the acceptability, readiness, alignment and capacity for systematic evaluation within the six regions.
- An assessment of the current evaluation capacity for regions and the network.

¹ National Cancer Institute CRCHD website. Geographical Management of Cancer Health Care Disparities Program Overview. Accessed October 6, 2011 www.crchd.cancer.gov/inp/gmap-overview.html

PROJECT DESIGN AND METHODOLOGY

The evaluation feasibility and framework development initiative was designed and approved in September 2010. The design included methodologies that, taken together, were the basis for identification, prioritization, pilot testing and assessment of the regions' current views on, and readiness to engage in, a system-wide evaluation approach. The methods used in the project included:

- Concept mapping;
- Evaluation process model development and approval;
- Pilot presentations of the results to each region;
- Integration of the resulting feedback.

The following subsections describe in detail each of these approaches, including the activities and levels of engagement in each approach.

CONCEPT MAPPING FOR FRAMEWORK DEVELOPMENT

To construct the foundation, or initial framework for evaluation, members of the CRCHD and the Evaluation Task Force used The Concept System[®] planning and facilitation methodology. Concept mapping is a mixed methods planning and evaluation approach that integrates familiar qualitative group processes (brainstorming, categorizing ideas, and assigning value ratings) with multivariate statistical analyses to help a group describe its ideas on any topic of interest and represent these ideas visually through a series of related maps.

Concept mapping had several key advantages for this inquiry:

- It combined the ideas of diverse stakeholders in unique ways to understand how the entire group thinks about approaches that will lead to a measurable reduction in cancer health disparities.
- It produced a clear visual representation of how the group as a whole thinks about what should be done to reduce cancer health disparities.
- It produced a clear visual representation and analysis of region specific information.
- It assured that we had a well-informed, group-oriented process.

The concept mapping process typically requires participants to brainstorm a set of statements relevant to the topic of interest, individually sort these statements into piles of similar content or themes, rate each statement on one or more dimensions, and generate a series of quantitative maps which reveal a topology of thought resulting from the analysis of this data. Participants can then use these maps as a basis for further discussion and a framework for action planning. The entire process is driven by the stakeholders themselves, ranging from initial brainstorming, to the eventual identification and naming of clusters, to interpretation and analysis of the maps.

The following sections summarize what the Planning Group and the Task Force, through an extended group of stakeholders and with the assistance of Concept Systems, Inc. (CSI) consultants, identified as specific issues that are relevant to what the networks are or could be doing to reduce cancer health disparities. The contributions of the participants led to the results presented in this report. This project enabled us to capture the specific ideas of all the individual participants, while also allowing us to capture themes and commonalities among all participants, as a basis for assessing the feasibility to evaluate the network's efforts.

The following steps were taken to achieve the goals of this study:

ESTABLISHING THE FOCUS

Members of the Planning Group and the Evaluation Task Force, with guidance from Concept Systems, Inc., developed a focus prompt to facilitate the collection of meaningful input from identified stakeholders:

“A specific thing for the network to do or include that will lead to measurable reduction in cancer health disparities is...”

IDENTIFY THE PARTICIPANTS

A large-scale participant based concept mapping initiative typically involves two levels of participation. The broadest inclusion of individuals (the “extended” group) is used for two critical activities in the project: the idea generation, usually via web-based brainstorming, and the value rating on a scale or scales of relevance to the project. The second is the “core” group, typically a subset of the “extended” list of participants. The “core” group participants are asked to contribute by participating in brainstorming, ratings *and* sorting. The core group for this project consisted of the members of the NCI Planning Group, Regional Coordinators and Evaluation Task Force Leads (N=25). The extended group consisted of a larger group of individuals who were selected for their knowledge of and involvement with NCI and the GMaP regions (N=103). Sorting is the fundamental participant activity from which the conceptual framework is constructed, and is therefore central to the methodology. Given the relatively greater degree of involvement of the core group in decision-making for the network, this group was asked to invest more time in the data collection effort.

IDEA GENERATION

At the September 29, 2010 GMaP Summit, participants contributed their input on specific issues relevant to lead to a measurable reduction in cancer health disparities. Additionally, during the period of February 14, 2011 through March 4, 2011, stakeholders were asked to provide input on the same focus prompt. Recognizing that the stakeholders' locations and their access to technology varied, the project enabled multiple methods for submitting ideas. Stakeholders were contacted via email and provided with a web

address for a project-specific website by which participants could submit their ideas online². Participants could also choose to submit ideas using a fax-back form upon request. CSI then conducted a targeted review of existing documents³ and added relevant ideas to the statement set.

IDEA SYNTHESIS

The brainstorming phase yielded a total of 245 stakeholder-generated statements. At a meeting on March 14, 2011, the Planning Group used the following criteria to review the preliminary statement set to produce a final set of 93 statements:

- Relevance to the stated focus question or within the scope of the question at hand;
- Redundancy or duplication;
- Clarity;
- Relative appropriateness for the sorting and rating tasks.

Appendix 1 includes the final list of 93 ideas that resulted from this process.

STRUCTURING THE IDEAS

Following the completion of the idea generation or brainstorming phase, participants were contacted again and were asked to participate in tasks to structure and rate the information.

Sorting. In the sorting task, individuals were asked to organize or sort the entire final database of 93 ideas into groups or themes based on their perceived similarity of the ideas. Members of the core group were asked to complete this task, as well as the subsequent rating task below, between March 21, 2011 and April 21, 2011. Concept Systems, Inc.² provided consulting assistance and facilitation to this process, and again provided a dedicated website for participants to complete the task online.

Rating. For the rating task, stakeholders who participated in the idea generation were contacted and asked to rate each of the final ideas on a five-point scale. Participants were asked to rate along two dimensions: *importance* (how important each idea is for networks to do or include in leading to a measureable reduction in cancer health disparities), and *feasibility* (how feasible it is to measure or assess). Stakeholders completed this task by using the dedicated website. Both the core group and the larger extended group participated in this process, which was completed on April 21, 2011.

² The Concept System[®] computer software (Concept Systems, 2010) was used to perform all analyses and produce all of the maps and statistical results. Data was also collected over the World Wide Web using the Concept System Global[®] software, to allow for participation from any location with access to the World Wide Web. Detailed references and articles on the Concept System can be obtained by calling 607-272-1206 or by emailing csiinfo@conceptsistemas.com.

³ NCI GMaP 2010 Summit Session Summaries and Reports, Region's Readiness Assessment Tool Reports and Summary (RAT Analysis), Core Elements document, and Administration Supplements.

The project had a completion rate of 68% for the sorting task, and 39% for the importance and feasibility ratings. The concept map is included in this report as Figure 3 (see page 18). The comparison of ratings on importance and feasibility for all participants is included as Figure 4 (see page 19).

COMPUTING THE MAPS

The Concept System[®]⁴ uses multi-dimensional scaling and hierarchical cluster analysis to integrate the sorting information from each individual, convert that qualitative information into quantitative data, and develop a series of concept maps and reports. These maps show the perspective of the entire group of participants, as well as sub-groups, relevant to the topic of focus. In effect, The Concept System[®] results represent the unique perspectives of a diverse group of individuals, preserve the best thinking of each individual, and integrate the data from each participant to construct and produce a coherent picture of the entire group.

The analysis uses the sort information to construct an NxN binary matrix of similarities, using the results of the sorting activity from all core group participants.

The total similarity matrix was analyzed using non-metric multi-dimensional scaling (MDS) analysis with a two-dimensional solution. The two-dimensional solution yields a configuration in which statements grouped together by participants most often are located more closely in two-dimensional space than those grouped together less frequently. The x, y configuration resulting from the MDS analysis was the input for the hierarchical cluster analysis. To determine the best-fitting cluster solution the analysts examined a range of possible cluster solutions suggested by the analysis, and took into account the fit of the contents within clusters, as well as the specific desired uses of the results in planning and action development.

MAP INTERPRETATION

The maps and reports produced by The Concept System[®] reflect and summarize the work of the stakeholders during the idea generation and structuring (sorting and rating) phases. The next step in the process required interpretation and discussion of the maps by the stakeholders. Three tasks were undertaken in this step:

- First, the resulting preliminary data was reviewed with the Planning Group on May 4, 2011. This review involved a preliminary discussion of the meaning, relevance and implications of the results.
- Second, the presentation was revised with suggested cluster labels from the Planning Group.
- Third, the final results were shared with the Planning Group and the Evaluation Task Force during a meeting on May 12, 2011. At the meeting, participants
 - Reviewed the maps;

⁴ The Concept System[®] and Concept System Global[®] software are licensed through Concept Systems Incorporated, Ithaca, New York (<http://www.conceptsystems.com>).

- Discussed the broader themes suggested by the data, including the overall agreement between roles and areas of expertise across regions on the degree of importance and feasibility of the items within each cluster;
- Discussed the Go-Zone plots to determine utility for planning and action;
- Began to utilize the Go-Zones as a tool for deciding what can be measured, and where more developmental work is needed;
- Considered the conceptual framework as an organizing structure for the formation of the structures and processes of the network;
- Were encouraged to use the information provided to assist with their regional implementation planning efforts, which each region was constructing at the time.

LOGIC MODEL DEVELOPMENT

The concept mapping results yielded a conceptual framework and provided a foundation for the development of a process logic model. Together, the concept map and logic model form an integrated view that captures the complexity of a system, as well as how it should be defined and measured. The concept mapping analysis and results describe the conceptual elements and their relative importance, and the logic model sequences these conceptual elements temporally and causally. The logic model, as a visual tool for program and evaluation planning, illustrates the sequence of steps involved in achieving the desired program outcomes and impacts.

Understanding how these concepts are related helps facilitate a more informed and efficient transition from the map to the logic model. This is relevant in this feasibility study as several outcomes (and the indicators used to represent progress toward reaching those outcomes) are temporally related, with some outcomes preceding others. Typically, logic models are constructed from lists of inputs, activities, outputs, and outcomes, and often developed as separate elements of a program. Understanding how topical areas on the concept map are related helps to place the concepts from the map on the model in a way that reflects the input of the contributors to the framework. In this case, each element in the logic model corresponds to a component or cluster of the concept map.

REGIONAL VIRTUAL MEETINGS

The purposes of the regional calls were to pilot the conceptual framework and logic model to assess utility in the regions. Objectives were to:

- Support the regions' evaluation emphasis and planning by presenting results of the framework study for their discussion;
- Identify and discuss the status of each region's current evaluation activities related to the feasibility of system-wide evaluation;
- Consider evaluation design elements for relevance, accessibility, and region utility;
- Hold six regional calls between June 14 and 30, 2011, and review the purposes and potential uses of the information gathered during the evaluation feasibility study;

- Present the additional conceptual framework results, with a particular emphasis on each specific region's feedback;
- Ask for discussion on the framework and the ratings feedback;
- Review the process logic model derived from the evaluation concept map;
- Seek region views and details on specific areas of evaluation emphasis indicated in the logic model/framework;
- Seek information on related measures and how they might be identified from the region's perspective.

RESULTS

The three-part design allowed for development, expansion, review and assessment of the draft evaluation framework produced through the concept mapping and logic model development. It also provided CRCHD with feedback on the feasibility of establishing and using a systematic evaluation framework for all regions in the GMaP program. We present and discuss results of each inquiry below.

CONCEPT MAPPING RESULTS

Results of the concept mapping were based on the brainstormed ideas gathered through several iterations from members of the regions, as described in the methodology section above. A total of 25 people were invited to sort, and 103 were invited to rate on two scales; importance and feasibility. Those who responded also identified the region with which they are affiliated and their role(s) in the region.

The concept mapping methodology produces a series of interrelated maps, which are views, at different levels of detail, of the same structure.

Sorting completion rates were good⁵, with completion rates of 68% for the sorting task. The percentage of ratings completion was relatively low for the importance and feasibility ratings at 39%. This may be related to the short timeframe allotted for ratings participation, and competing deadline-related deliverables for those invited to participate. The number of individuals who completed each activity (17 sorts, 40 importance ratings, and 40 feasibility ratings) is well within the average range for producing reliable results in concept mapping. We will discuss the effect that low participation in ratings from each region may have on the utility of the results, and make recommendations to mitigate the issue.

CONCEPT MAPS

Concept maps were generated showing the relationships between the 93 distinct ideas generated during the brainstorming process. The point map, Figure 1 below, represents each idea as a point on the map, and provides a meaningful arrangement of the content based on the sort data. Ideas that appear closer together were sorted more frequently by participants into the same groups or piles.

⁵ Rosas, SR, & Kane, M. Quality and Rigor of the Concept Mapping Methodology: A Pooled Study Analysis, in press. *Evaluation and Program Planning*.

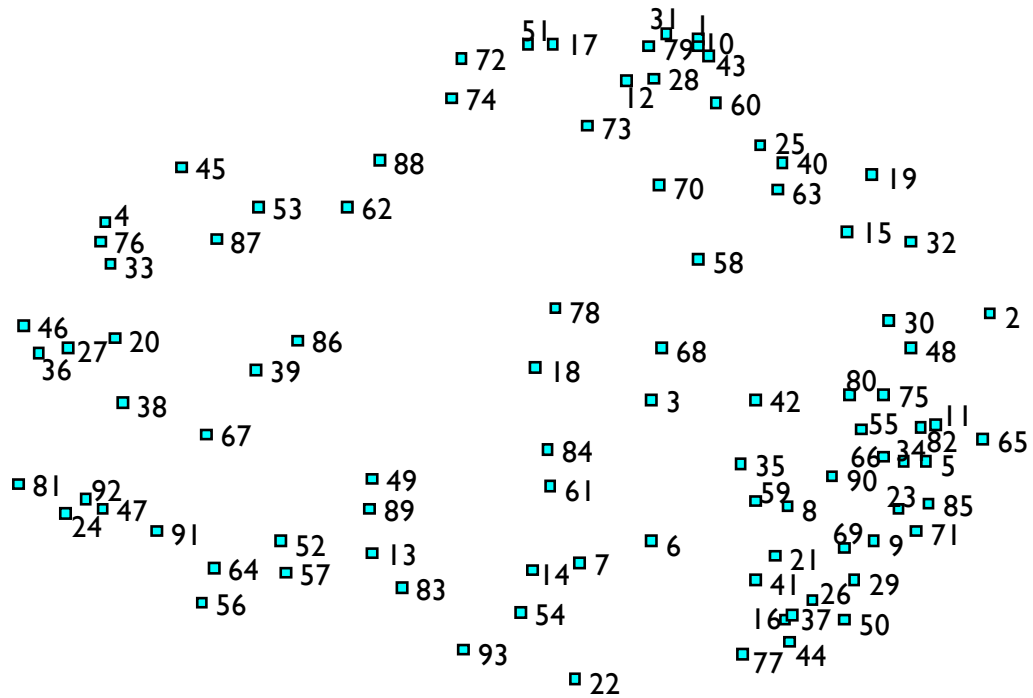


Figure 1. Point Map, indicating the array of all statements and their relationship to each other.

As a result of additional analyses, a cluster point map illustrates how the content of the individual ideas is related via higher level concepts. The cluster map shows the categories that emerged based on participant sort data. In this case, the optimal solution was a nine-cluster solution, as indicated in Figure 2 below.

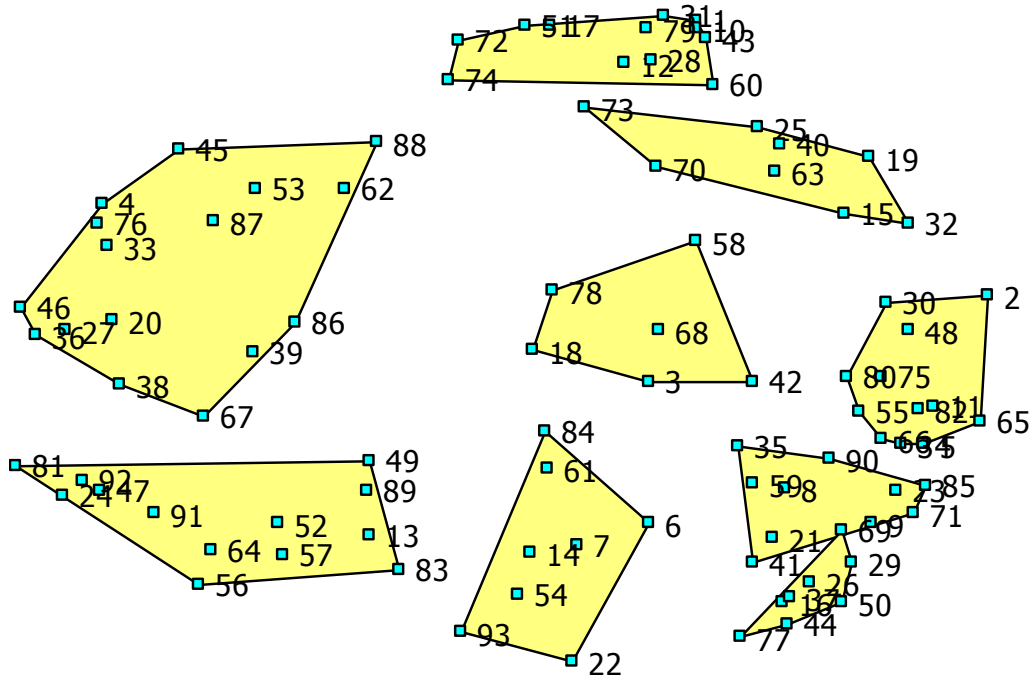


Figure 2. Point Cluster Map, showing point values groups within statement clusters.

The data suggests that nine major issues can be considered as a meaningful framework when developing an evaluation framework for the NCI GMAp Network. The Labeled Cluster Map, Figure 4 below, shows the clusters labeled with these categorical issues. The name given to each cluster reflects the theme or topic expressed by the statements within that cluster. The following are those categories, as they are represented in a clockwise review of the map:

- “Community Engagement” describes the purposeful engagement of the community in the research process to ensure the relevance of results.
- “Partnership Coordination” represents the coordination of multiple partners to support successful infrastructure development and operations.
- “Transdisciplinary Integration” contains items describing the integration of multiple disciplines to expedite the generation of innovative and applicable research findings.
- “Science Management” contains statements on the organization and efficient management of the scientific process.
- “Funding and Sustainability” emphasizes taking advantage of current and future resourcing opportunities.
- “Research Assets” describes enhancements to the research process that facilitate and make more efficient the research management process, such as integrated data systems; and time and infrastructure support for the researcher, team or process.

- “Capacity Building” contains items on the specific efforts of the networks to bolster the structures and processes that enable them to conduct research in efficient and effective ways, including training and infrastructure readiness.
- “Culturally-based Clinical and Specimen Research” represents the core scientific foci of the networks, including ensuring that research is culturally relevant to the target populations.
- “Communication and Dissemination” details the centralized activities of internal and external communications and dissemination of key outputs.

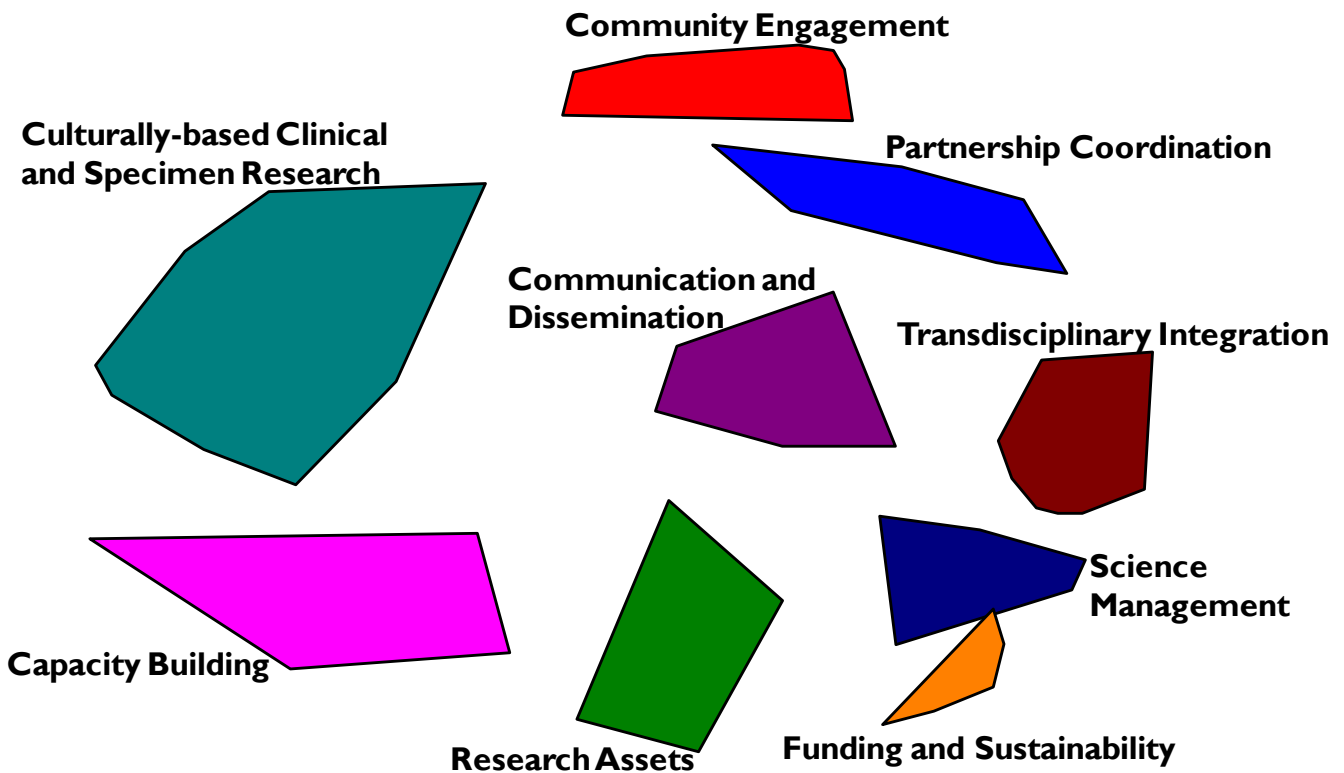


Figure 3. Labeled Concept Map. A nine-cluster concept map indicating the main topics, or concepts, that contain the 93 ideas that make up the content of the project results.

PATTERN MATCHES

Ratings information that was requested in the development of the framework. To show the comparison of ratings from all project participants who provided ratings, we created a series of Pattern Matches. A pattern match is a ladder graph that uses two vertical number lines and connects them in space to illustrate the degree of confluence or difference between two ratings on the same topic. In this case, we illustrate relative *importance* and *feasibility*.

The Pattern Match below shows the correlation between the average *importance* and *feasibility* ratings for each cluster, taking into account the ratings data from all who provided it. Cluster averages are calculated

by averaging all participants' ratings of all statements in a particular cluster. In this case, the overall correlation is .37, which indicates that participants' perceptions of importance have a relatively weak relationship to feasibility. Figure 4 is a *relative pattern match*, which aligns the actual highest averages on each scale and the actual lowest to produce an image that allows comparison on equalized scales. The degree of slope of the lines connecting concepts on the left (importance) to same concept on the right (feasibility) illustrates the relative relationship of each conceptual cluster on importance and feasibility. The greater the degree of agreement between the concepts, the stronger the correlation, and the more horizontal the lines will appear.

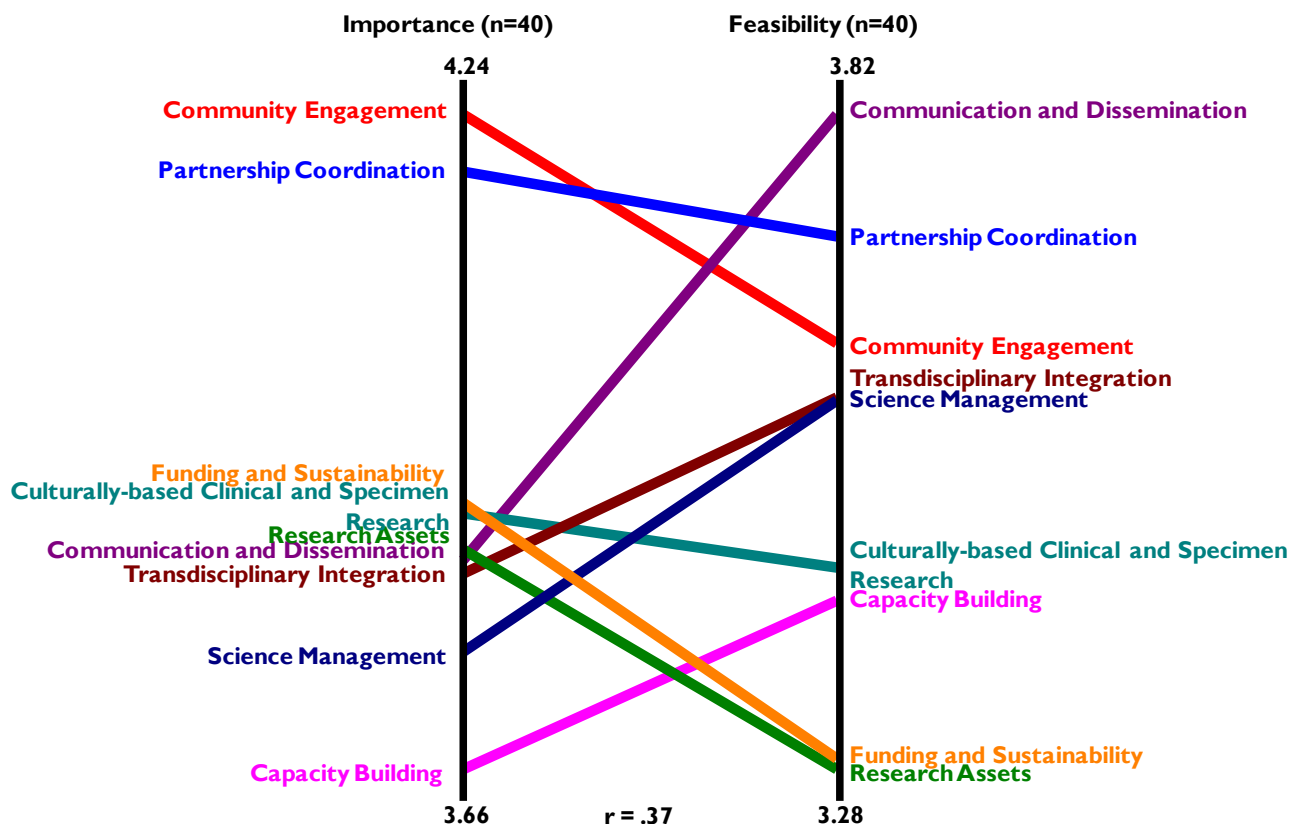


Figure 4. Importance and Feasibility Pattern Match: All Participants.

To illustrate: on the left vertical axis the location of the conceptual cluster “Capacity Building” indicates that, on average, those who rated gave the items in that cluster ratings of lower importance than the items in all other clusters, on average. On the feasibility vertical line, however, those same items that comprise “Capacity Building” were, on average, rated higher than they were rated on importance, but lower than items in clusters such as “Culturally-based Clinical and Specimen Research”.

The analysis also allows for comparison on the same rating (e.g., importance, from the perspectives of participant subgroups).

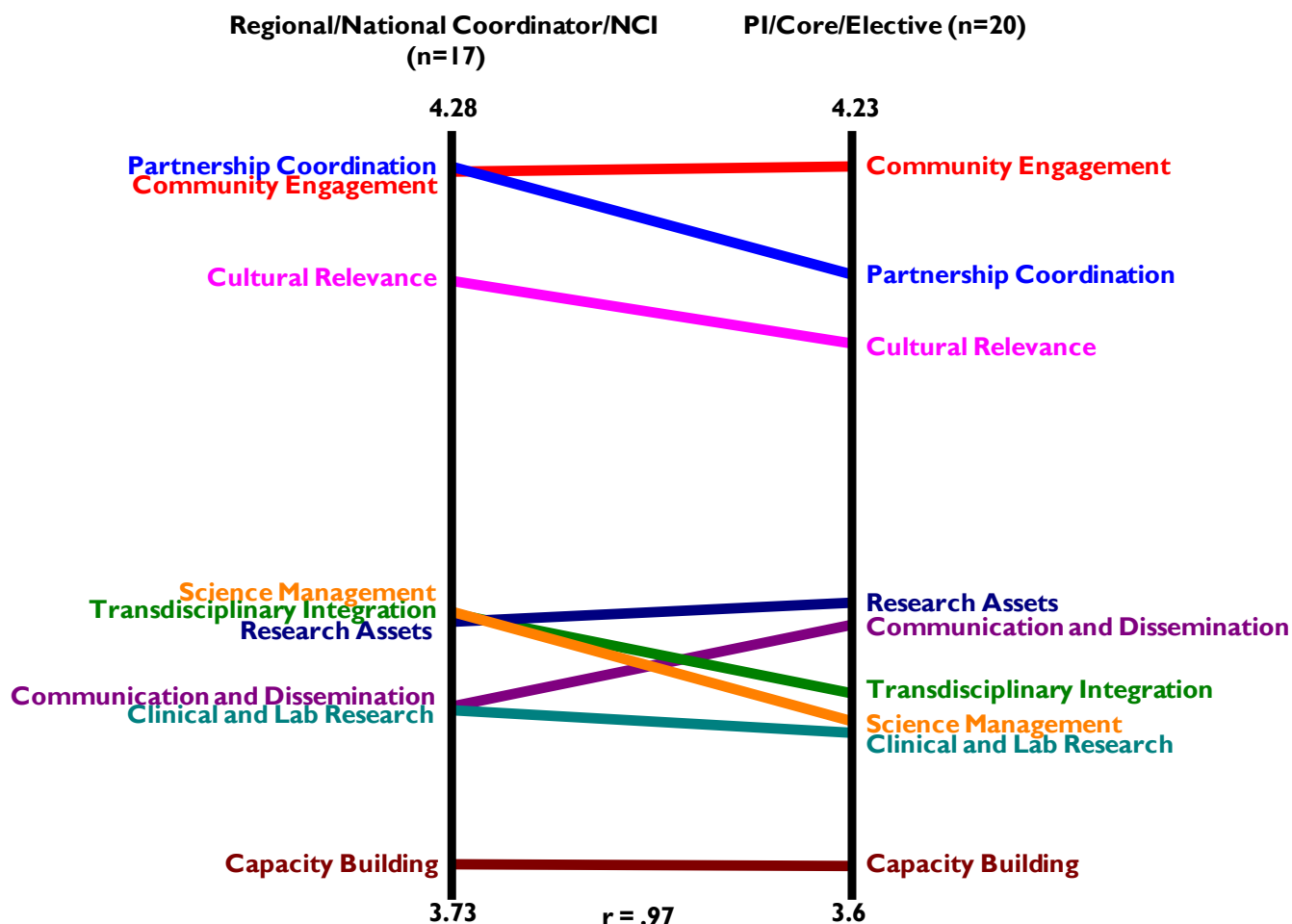
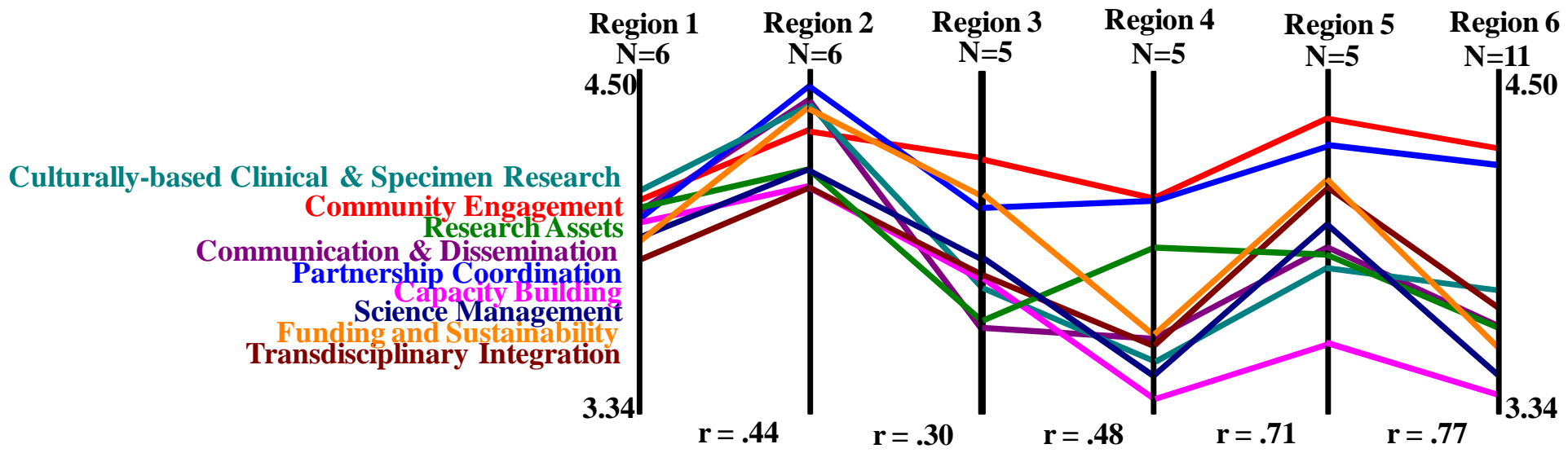


Figure 5. Importance Pattern Match: Sub Group Comparison by Roles.

Figure 5 illustrates the *importance* rating only, and compares the ratings of those who self selected by role. Ratings of Regional and National Coordinators (n=17) were compared to those of Project Investigators, Cores and Electives (n=20). In this case, you will see that the perceptions of importance are strongly aligned between these subgroups, with a correlation of .97.

Perceptions of importance were also compared across the six regions of the NCI GMaP network. Figure 6 illustrates the varying degrees of agreement from region to region.



Legend

- Culturally-based Clinical & Specimen Research
- Community Engagement
- Research Assets
- Communication & Dissemination
- Partnership Coordination
- Capacity Building
- Science Management
- Funding and Sustainability
- Transdisciplinary Integration

Figure 6. Importance Pattern Match: Sub-Group Comparisons by regions.

Noting that the small number of participants for each region limits the utility of the data for comparison from region to region, the picture of the ratings relationship from region to region in Figure 6 allows us to make some limited observations about regions whose views are indicated to be more closely aligned with each other on importance. The correlations indicated here are between regions as they are aligned in this picture, so they illustrate only that relationship and cannot be generalized to the non-adjacent regions. The pattern of perception of *importance* across regions suggests that *Community Engagement* is among the highest or the highest cluster averages for each region. Observed differences in importance occur from region to region for the average of the items in the cluster *Culturally-based Clinical and Specimen Research*. Regions 5 and 6 rate *Capacity Building* as lowest in importance. These snapshots seem to support the differences in identity and organizational maturity from region to region. It should also be noted that each region's data was analyzed to represent a snapshot of that region's perspectives on importance and feasibility. These are included as Appendices 5.3 through 5.8.

GO-ZONES

Pattern Matches provide an overview of the concepts represented on the cluster map framework, and how the value ratings indicate, on the conceptual level, the degree of agreement between the perceptions of those who rated on importance and feasibility. Each cluster contains the specific statements or details that were contributed by participants during the brainstorming phase, and sorted as similar. We now turn our attention to the specifics within the clusters, linking the participants' ratings values on each statement within a cluster. Concept mapping results include Go-Zone analyses for each conceptual cluster represented on the map. Figure 7 illustrates a sample Go-Zone. These analyses are bivariate plots created for each cluster that show the average *importance* and *feasibility* ratings of each statement within a cluster. Just as the cluster map, Pattern Match analyses, and conceptual framework model enable decision-makers to observe, understand and agree upon the relationship and relative value of concepts at an *organizational or strategic* level, the Go-Zones support the observation, discussion and use of *tactical or objective* level details within the conceptual construct that the map provides.

Go-Zone analyses enable stakeholders to keep the larger conceptual view in mind, while returning to the detailed contents of each cluster to support prioritization. They may represent the relationship of two sets of ratings, such as importance and feasibility; or may compare how two subgroups of participants rated on one scale. In this example, we show a two-rating Go-Zone.

Community Engagement

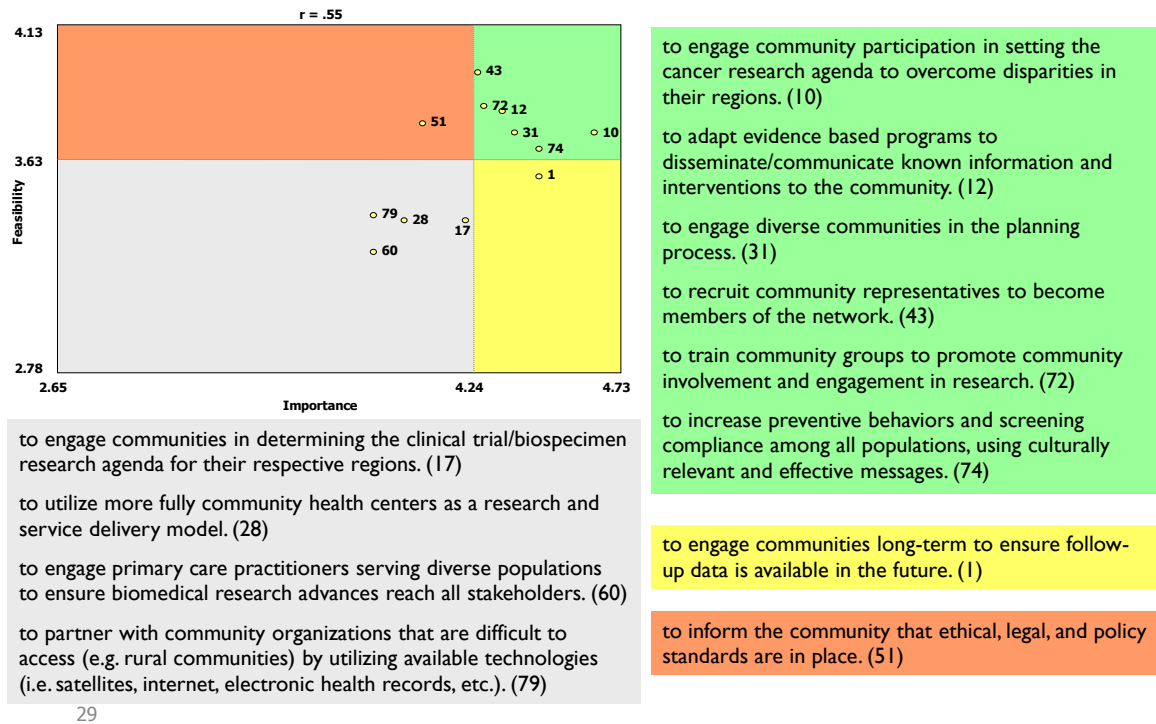


Figure 7. Example Go-Zone Analysis.

In a Go-Zone analysis, items located in the upper right quadrant were rated higher than the mean for that grouping, on both *importance* and *feasibility*. Typically, these ideas are often the most logical ideas for action, assessment or measurement. A group may find, though, that ideas that are rated above average on both *importance* and *feasibility* are indeed important ideas but are already being addressed. Items in the upper left (high *feasibility* and relatively low *importance*) and those in the lower right (high *importance* and relatively low *feasibility*) can be considered “gap” areas. These gap areas contain items for which value imbalance is present in the feedback of participants. In an initiative whose purposes include supporting meaningful change from the current state to future improvement, the “gap” zones can provide guidance as to tactics or objectives that are considered important but more difficult to achieve or support, or less important but with a greater likelihood of feasibility. Both categories of potential action can be valuable for strategic decision making to ensure accomplishment and improvement.

The area of relatively low importance and relatively low feasibility, considered the lesser value items in a particular conceptual area, may nevertheless yield useful feedback to planners. We encouraged discussion about the contents of each grouping to inform action planning decisions. In general the Go-Zone analysis provides a way to view the data and engage in assisted dialogue about implications, utility and ways to measure progress on such desired outcomes.

Appendices 2, 5 and 7 include all pattern matches and Go- Zones developed for this project. The Project Staff and Planning Group reviewed the data in preparation for the regional virtual meetings, in order to guide the questions that would frame the meetings. The Planning Group reviewed the Pattern Matches and Go Zones in preparation for the July 14, 2011 Summit, to support the presentation on the evaluation framework.

LOGIC MODEL RESULTS

Graphically, the concept map depicts the related components, both at the detail and the higher conceptual level, of the emerging evaluation framework. Using the components from the concept map, CSI constructed a process logic model. Below is a table that describes the logic model elements in 3 columns. To approximate the relationships among the logic model topics within three major time-sequenced activity areas: “Structural and Research Readiness”, “Stakeholders and Locales”, and “Research Processes and Activities” It does not however describe the relationship pathways among the elements. For the model that describes the relationship more fully, see Appendix 8.1.

The topics arrayed in related order on the logic model are viewed to be critical to the success of the GMaP initiative in reducing cancer health disparities. The logic model captures stakeholders’ assumptions about how the different infrastructures and activities within and across the regional networks will lead to desired network outcomes and ultimate impact. This operational model can serve as the foundation for the evaluation plan and measurement development.

Structures and Process of the Network			Network Outcomes	Impact
Structural and Research Readiness	Stakeholders and Locales	Research Processes and Activities	Network-specific objectives	Reduce Cancer Health Disparities
<u>Science Management</u> Formalize processes for conducting science Assess and monitor progress toward meeting scientific objectives				
<u>Partnership Coordination</u> Link system leaders and partners				
<u>Funding and Sustainability</u> Secure funding and resources for research activities Develop strategies for sustaining future research efforts				
	<u>Transdisciplinary Integration</u> Emphasize team science among system partners Collaborate and coordinate efforts across scientific disciplines			
	<u>Community Engagement</u> Provide opportunities for community member input and voice Partner with institutions and organizations within the community			
<u>Research Assets</u> Integrate and standardize data systems Secure and provide incentives for enhancing research				
	<u>Culturally-based Clinical and Specimen Research</u> Expand and enhance clinical trials research Expand and enhance biospecimen research Consider and emphasize diversity in working towards scientific objectives			
<u>Capacity Building</u> Train and educate scientific workforce Support and use emerging technologies in the conduct of research Support and use bioinformatics across research				
<u>Communication and Dissemination</u> Connect to and share with system partners using technology				

The “structural and research readiness” domain encompasses: 1) the management of the scientific process, 2) funding for research and the sustainability of resources, 3) assets for advancing research, and 4) efforts to build or enhance the capacity to carry out the work of the initiative. This area of the model is positioned furthest away from the outcomes of the initiative and is seen as the core resources needed to support the innovative scientific work. The model specifically suggests that for the initiative to be successful, training and educating the scientific workforce, supporting and using emerging technologies, using bioinformatics in the conduct of research, and integrating and standardizing data systems as critical elements. In addition, securing funding and resources for research activities, including incentives for enhancing research and developing strategies for sustaining future research efforts will ensure that the GMaP initiative has the financial resources to carry out its research related mission. Finally, developing formalized processes for conducting the science of the initiative, and in a related way establish systems that help to assess and monitor progress toward meeting scientific objectives, will help ensure that scientific teams are working effectively and efficiently.

The “stakeholders and locales” domain encompasses: 1) the coordination of partners, and 2) the engagement of the community in the research processes of the initiative. Occupying a central position in the logic model, this area serves as a crucial linkage between the resources for the research and the processes for conducting the research. It makes explicit the role of the communities, institutions, and places of interest within and across the regions. The model specifically suggests that for the initiative to be successful in reducing cancer health disparities, it requires partnerships with institutions and organizations within the community in ways that provide opportunities for community member input and voice. Because of the transdisciplinary nature of the research, linkage between system leaders and partners is also a key component to maximize success.

The “research processes and activities” area of the model emphasizes: 1) the transdisciplinary integration activities, as they are connected, and 2) culturally-based clinical and specimen research. As a key set of factors in the accomplishment of short-term and intermediate outcomes of the initiative, team science among system partners is emphasized and collaboration and coordination of efforts across scientific disciplines is deliberate. An important consideration and emphasis is the diversity in working towards scientific objectives while simultaneously expanding and enhancing clinical trials and biospecimen research. This is greatly influenced by the efforts to build capacity that contributes to and enhances research, as well as the engagement of target communities who have a stake in the successful outcomes of the research.

Finally, “communication and dissemination” activities, where technology is used to connect to and share with system partners are operationalized as a constant in the model, influencing each of the domains of the structures and processes of the network.

REGIONAL VIRTUAL MEETINGS RESULTS

CSI conducted one virtual meeting/group interview with each of the six regions to present the conceptual model, the region’s ratings independent of others’, the region’s ratings in comparison to other regions, and

the draft logic model for evaluation. Using the client-approved inquiry approach, CSI moderated discussions with each region about the conceptual framework and region-specific ratings to elicit feedback on the framework, the feasibility and readiness of the region to engage in systematic evaluation planning, and current region priorities related to evaluation and planning. NCI staff audio taped the discussions, to provide the Center with additional opportunities to review it in the future. Some themes that emerged included the utility of the ratings, the relationship of each region to the logic model presented, and the need for additional analysis.

During each virtual meeting, CSI first presented the conceptual framework and oriented the attendees to the relationship of the map and ratings data to the draft logic model. CSI reviewed the maps; the region's rating data, and the comparison on the cluster level of importance for all regions. CSI described the development of a draft evaluation framework, seeking feedback on the region's attitude toward the conceptual framework. CSI described the meaning of the ratings by cluster, and, recognizing the small participant numbers per region, suggested that the guidance provided at least allows for observation and perhaps confirmation of current region thinking.

CSI described how the map was reviewed to suggest "territories" of themes within the map that would be relevant for an evaluation construct. This suggested the structure of the process logic model, linking the GMaP program cores and specialties via these logic pathways.

The logic model was presented as a useful way to look at a structure that differs slightly from the linear logic model, and might provide a region a supporting interrelated structure to fulfill its objectives.

GENERAL FEEDBACK

Each regional virtual meeting feedback provided insight into that region's readiness to engage in a systematic approach to evaluation. Taken together, the results of the calls indicated that the regions are in different positions of maturation and cultural readiness to engage in a system-wide evaluation structure. The following items are comments that emerged from more than 3 of the 6 regions. As an overview:

- The regions acknowledged that broader input, particularly on the ratings, would yield more useful information, and all requested the opportunity to do so.
- The process logic model components are confirmatory for many regions and reflect the sophistication of their work.
- The process logic model is general enough to capture the variety of objectives and outcomes, although for some regions more time is needed to consider its utility and application.
- Although widely applicable, greater specificity of the model for use at the regional level is warranted for alignment with regions' current planning.
- Timing of the process logic model production and dissemination seemed out of alignment with expectations for implementation plan development and other deadline related network requirements.

Variations in the region feedback included the following:

- The pace of evaluation planning varies across regions. For some, the model may help operationalize planning currently underway, while others feel they are beyond where the model may be useful.
- The extent to which regions see themselves as part of a comparative GMaP network evaluation varies.
- Independent regional planning processes are underway, and will likely yield a variety of objectives, outcomes, and emphases for evaluation.
- Most regions viewed the model as an assistive device to help them with establishing measurement. Others see this as a tool to support integration of their evaluation work.
- Two regions reported that they have progressed with their own approaches, and felt this model would not add value for their purposes.

Regions 1 and 2 recognized and confirmed the logic model structure as useful, and a potential asset for guiding evaluation planning and conduct. Region 5 also indicated that the information presented was interesting and related to their focus—especially emphasizing community issues.

Region 3 indicated that the model had potential as an adaptation, or addition, to the models they have begun or developed, also noting that the information presented requires more time to absorb.

Regions 4, and, in particular, region 6, voiced the position that the work presented here was misaligned with where the region currently is relative to its planning. Region 6 indicated that the information was dated and the results were not aligned with their approach or priorities, or how they see evaluation's place in the region's successful conduct.

The regions did not identify measures or indicators of progress, for the following reasons:

- The attendees did not have enough time in the discussion to absorb the information.
- The regions are focused on the need to deliver their implementation plan and other deadline-related requirements.
- The right region evaluation staff was not present.
- The model was not deemed relevant or misaligned with their current place in program and evaluation planning.

Although the regions were unable to identify measures and indicators of progress or impact for high value topics during this activity, the feedback has indeed helped assess the general feasibility to conduct systematic evaluation in each region and across network. Potential measures are suggested in the Section Guiding the Development of Short Term and Immediate Outcomes in Utilization of Results. Specific comments by region are provided in Appendix 7.8 GMaP Regional Calls Feedback Summary.

UTILIZATION OF RESULTS

The results of this framework development and feasibility assessment can be utilized in a variety of ways and at multiple levels. While the conceptual and logic model development processes yielded consensus to illustrate the theory of how the NCI GMaP processes lead to a reduction in cancer health disparities, the application of this consensus framework can clearly enhance systematic evaluation planning. In particular, consideration for how the results can be used to: a) operationalize outcomes and develop measurement strategies, b) align implementation and evaluation across the system, and c) further plan for and prioritize program development and evaluation efforts will maximize the utility of the cross-network input. We detail some of the considerations and potential uses below.

GUIDING THE DEVELOPMENT OF SHORT TERM AND INTERMEDIATE OUTCOMES

Describing the conceptual (what we think should happen) the operational (how it should happen), and the measurement (how we know it happened) domains helps shape the overall model for evaluation going forward. The concept map reveals the interrelationships between components of the initiative necessary to be successful in reducing cancer health disparities from the perspective of key systems stakeholders. The logic model describes a presumed program theory for the complex research initiative and conveys the sequence of expected processes and potential outcomes. The concept map and process logic model form an integrated view that captures the complexity of the system, as well as offers suggestions on how it should be defined and measured.

Based on the process logic model and outcome constructs it is possible to specify the measurement and analytic approaches that can be used to gather comprehensive evaluation data. In effect, for each construct and their respective outcomes, one or more measurement approaches (e.g. survey methodology, bibliometrics, content analysis, network analysis, process modeling, trend analysis, etc.) may be identified based on currently available practice and data, input from system stakeholders, and relative expertise and capacity. This will enable identification of methodological approaches that can be applied across the constructs and outcomes. For example, it is likely that multiple outcomes in various areas (e.g. Transdisciplinary Integration, Community Engagement, Capacity Building, etc.) will be addressed through survey research, while others might be assessed well through systematic peer review.

Clearly the ultimate outcome of the initiative is to reduce cancer health disparities. However, in this process the more immediate markers of success did not explicitly surface, indicating some gaps in the program's specification of short-term and intermediate evaluative indicators. Nonetheless, because of the clear linkage between program elements and the conceptual tie to the ultimate measure of success of the system of research, it is or will be possible to specify the short-term and intermediate outcomes starting with the data gathered during this process.

Using the model and elements within as a guide, several potential network outcomes emerge. In the tables below, some suggested short-term and intermediate outcomes are listed, along with the corresponding statement numbers from the concept map, the cluster in which the statement is located, and the process model domain most closely associated with the cluster.

POTENTIAL SHORT-TERM OUTCOMES SUGGETED BY THE MODEL

Suggested Short-term Outcome	Concept Map Statement number(s)	Concept map cluster	Process logic model domain
Increased number of trained staff to sustain research, especially clinical research.	64	Capacity Building	Stakeholders & Locales
Increased opportunities for community participation in setting the cancer research agenda to overcome disparities in their regions.	17	Community Engagement	Stakeholders & Locales
Increase in opportunities for engagement of diverse communities in the planning process.	31	Community Engagement	Stakeholders & Locales
Increased resources acquisition.	77	Funding and Sustainability	Structural and Research Readiness
Increase in the number of external collaborators.	35	Science Management	Structural and Research Readiness
Increased research team productivity, in the form of publications and presentations.	82, 65	Transdisciplinary Integration	Research Processes & Activities
Increased resource sharing among network partners.	61	Research Assets	Structural and Research Readiness
Increase in the number of trained community groups to promote community involvement and engagement in research.	72	Community Engagement	Stakeholders & Locales

POTENTIAL INTERMEDIATE OUTCOMES SUGGESTED BY THE MODEL

Suggested Intermediate Outcome	Concept Map Statement number	Concept map cluster	Process logic model domain
Increased screening compliance among all populations.	74	Community Engagement	Stakeholders & Locales
Increase in the quality of bioinformatics support.	56	Capacity Building	Structural and Research Readiness
Increased institutional capabilities to support research using emerging technologies.	13	Capacity Building	Structural and Research Readiness
More effective partnerships among institutions supporting cancer health	19	Partnership Coordination	Stakeholders & Locales

disparities research.			
Increased efficiency of communication among GMaP partners.	80	Transdisciplinary Integration	Research Processes & Activities
Increased efficiency of information exchange among GMaP partners.	78	Communication and Dissemination	All Domains
Increase in the number and type of interactions from multiple basic, clinical, and translational areas.	82	Transdisciplinary Integration	Research Processes & Activities

CONSIDERATIONS FOR UTILIZATION AT THE REGIONAL LEVEL

The concept map and process logic model form an integrated view that captures the complexity of the system, and suggests how it should be defined and measured. At this time, each region indicates that it is actively developing or already has stable evaluation initiatives. But the level of engagement, consideration of the utility of the model by each region, and the variance in regional feedback indicate that regions are not yet, as a collective of science teams, prepared to engage in the development of an integrated evaluation approach. Structural and program capacity exists within the regions, but there does not yet exist a common acceptance or expectation of value of a system-wide evaluation framework. This position varies from region to region, naturally. Nevertheless, the flexibility inherent in the model enables each region to design an approach specific to their context, yet maintain some consistency with the systems level.

Before an integrated model and approach will be finalized, regions can collect additional feedback, and consider the utility of the model independently:

- Regions may decide to conduct an additional ratings collection on the concept map content to support a region’s prioritizing evaluation activities. A broader cross-section of individuals within the regions can be queried on the importance and feasibility of activities and processes to clarify priorities for evaluation. The resulting data may assist the regions in aligning themselves more readily with an integrated model that NCI seeks to use.
- Once the NCI GMaP program specifies system evaluation objectives, regional teams, led by their evaluation leads, might systematically assess and monitor the readiness and capacity to meet those system evaluation objectives. Regional teams may examine the relevance and application of the model for connecting their evaluation priorities to the development and evaluation of the integrated network, in communication with the program leadership.

CONSIDERATIONS FOR UTILIZATION AT THE SYSTEMS LEVEL

In thinking about the application of the conceptual and logic models that emerged from the framework development process, the NCI GMaP Program Directors may want to consider how other large-scale systems of scientific research have used similar frameworks in building systems of evaluation. Given the formidable evaluation challenges, some common to other large scale scientific initiatives (e.g. multiplicity of goals and agendas, implementation management), and others unique to the scientific, social and ethical

issues of cancer health disparities, the lessons learned from the application in other areas may be helpful. Evaluation of large-scale research initiatives is relatively new and there are few emerging models and examples to guide evaluation in this area^{6,7,8,9,10}. In particular, previous evaluation work with the NIAID HIV/AIDS Clinical Trials Networks and the NIAID/Division of Microbicides and Infectious Diseases' Regional Centers of Excellence are good examples of how to approach assessment of large-scale publicly-funded scientific research enterprises that focus on a broad range of processes and outcomes.

From our experience, one of the most challenging aspects is identifying the goals of a complex research initiative across a wide array of stakeholders, each with a set of expectations as to what constitutes success. Due to the broad range of activities, potential outputs, and outcomes of large complex research initiatives it is essential that a comprehensive model to serve as guide for evaluation is developed, such as the effort taken here. Evaluation of multi-site, collaborative scientific research initiatives needs to focus on gathering systematic evidence on program performance and rely on multiple lines of evidence to draw conclusions about efficiency and effectiveness. Based on our experience several considerations for application at the systems level are warranted:

- Program leadership and management can use the current process logic model within a comparative GMaP network evaluation as a tool for synthesizing regional evaluation plans. Each regional evaluation plan can be assessed relative to the overarching framework and synthesized in a way that contributes to broader understanding of evaluation processes and outcomes across the GMaP research enterprise.
- Program leadership and management can use the process logic model to identify short-term and intermediate outcomes of program-wide activities. From a review of each region-specific evaluation plan, short-term and intermediate outcomes can be identified and aggregated to inform the comprehensive process logic model, expanding the understanding of the immediate results of research activities across the enterprise.
- Program leadership and management can develop a series of evaluation questions, consistent with the hypothesized tenets inherent in the conceptual and logic models, that when answered can be used to improve aspects of the system. Moreover, with increasing experience and sophistication gained from the initial studies, new evaluation approaches can continuously be designed and implemented to optimize evaluation measures, and continue to be integrated into a system of evaluation rooted in the common model.

⁶ Quinlan KM, Kane M, Trochim WM: Evaluation of large Research initiatives: outcomes, challenges and methodological considerations. *New Directions for Evaluation* 2008, 118:61-72.

⁷ Trochim WM, Markus SE, Masse LC, Moser RP, Weld PC: The evaluation of large research initiatives: a participatory integrative mixed-methods approach. *Am J Eval* 2008, 29(1):8-28.

⁸ Stokols D, Fuqua J, Gress J, Harvey R, Phillips K, Baezconde-Garbanati L, Unger J, Palmer P, Clark M, Colby S, Morgan G, Trochim W: Evaluating transdisciplinary science. *Nicotine Tob Res* 2003, 5:(S-1), S21-S39.

⁹ Andersen L, Gwaltney M, Sundra D, Brownson R, Kane M, Cross A, Mack R, Schwartz R, Sims T, White C: Using Concept Mapping to Develop a Logic Model for the Prevention Research Centers Program. *Prev Chronic Dis* 2006, 3(1). [http://www.cdc.gov/pcd/issues/2006/jan/05_0153.htm].

¹⁰ Kagan JM, Kane M, Quinlan KM, Rosas S, Trochim WMK. Developing a conceptual framework for an evaluation system for the NIAID HIV/AIDS clinical trials networks. *Health Res Policy Syst.* 2009. 7:12.

OBSERVATIONS AND RECOMMENDATIONS FOR NEXT STEPS

As outlined in this report, CSI's approach recognizes the increasing demand of public institutions worldwide to evaluate the investment in research—particularly collaborative research—through quantitative outcomes. Experience suggests that, for the most part, outcomes of public investment in research can fall into three major, interrelated categories: knowledge, wealth, and health.¹¹ Each area has its own set of challenges to measurement and each requires clear description of the variety of effects to be identified and evaluated. A system of research therefore needs to articulate and specify a range of indicators of success within a relational framework. We concur with others in the field of health research evaluation that assessing impact of scientific research requires a multidimensional and multi-component approach because of the unpredictable, non-linear and contingent nature of research impact and its associated processes.¹²

With the expectation that today's scientific research enterprise is increasingly collaborative and coordinated at multiple levels, several sources of input are needed to define the goals of these complex and diverse systems, develop strategies to work across disciplines in new and innovative ways, and evaluate the outcomes of collaborative work. The framework development process conducted in this project yielded conceptual and logic models that, with further specification and customization to the needs of the program and regions, can help define and operationalize indicators of success, data sources, and data collection. This is has both inherent and explicit value to the program, and, potentially, to each region—both as an independent research system, and as a member of the larger system of regions.

As described above, although a standard framework for evaluation has been articulated by the CRCHD program as a value, a systematic evaluation construct for all regions is not yet a commonly identified priority for the regions. We have identified feedback that supports this observation. This initiative has yielded relevant products and useful, current-state feedback. In addition to the evaluation framework and logic model, feedback contained here provides a useful window into the status and priorities of regions relative to feasibility of conducting systematic evaluation.

Before the project results can be used as suggested above, specific next steps would be logical. We recommend that the GMaP Program leadership and staff have the opportunity to:

- Review in detail and as a group the conceptual structure, the logic model, and the regional feedback to assess the commonalities and differences in perception and priority between the program and the regions, and among the regions.
- Discuss the relationship of this initiative, and its results, to each region's status, program activities and readiness to conduct integrated evaluation.

¹¹ Wells R, Whitworth, JA. Assessing outcomes of health and medical research: do we measure what counts or count what we measure? *Australia and New Zealand Health Policy*, 2007 4:14.

¹² Buxton M, Hanney,S. How can payback from health services research be assessed? *Journal of Health Services Research & Policy* 1996; 1(1): 35-43.

- Engage leadership and Evaluation staff within the regions to consider in greater depth the applicability of the draft evaluation framework developed through this process—specifically in relation to their own activities, progress, status and objectives for evaluation.
- Prioritize and focus the efforts of the cross-regional evaluation group, pooling the evaluation expertise throughout the system, as a formal mechanism for planning and supporting evaluation activities at multiple levels.

The results of these cross-program discussions will, we believe, yield a stronger level of adoption of systematic approaches to evaluation and emphasis on team science and evaluation, and produce concrete tools to support the work of the regions and effective evaluation of that work.

For further information on concept mapping, please contact:

Concept Systems Inc.
136 E. State St.
Ithaca, NY 14850

Telephone: 607.272.1206

Toll-free: 800.260.1602

Fax: 607.272.1215

Email: csiinfo@conceptsistemas.com

www.conceptsistemas.com