



**Bay Area Regional GIS Council**

**BAR-GC**

**Risk Assessment / Management Plan**

Revised June 19, 2002



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## Executive Summary

### Project Brief

#### Bay Area Regional GIS Council Plan

#### Project Name

Lis Klute

#### Project Manager

MTC, ABAG, BAAMA, CCC, City of Berkeley, Bay Area Regional GIS Council Formation Team

Risk Plan	Projected	Budgeted
Costs	\$20,000	\$0.00
Start Date	2/01/02	3/01/02
	5/30/02	3/4/02

**History & Situation:** Geographic Information System (GIS) development efforts and policy issues have generally been addressed largely County and agency by agency within the Bay Area Region. Efforts to combine and create regional core GIS layers such as parcels, roads, political boundaries have been largely unanswered. The recent creation of a State of California GIS Council (CGC) has renewed the opportunity for better coordination between state and local agencies toward the creation of regional GIS policies and data.

**Issues & Opportunities:** The primary issue is the lack of an established organization or local and regional agencies representing the 9 county Bay Area, dedicated to work together on GIS issues. The State has directed the Counties or agencies to form regional councils to assist the state council in reaching local jurisdictions and to act as the receptor for input to the State Council. The opportunity is to develop a Bay Area Regional (BAR) GIS Council. that can work together to provide input related to GIS policy, development of core GIS data sets, and coordinated and cooperative data sharing. The BAR will compile the business needs, functional requirements of the regional and local governments as they apply to the development, maintenance, sharing and analysis of core GIS data layers and specific strategic projects in support of the CGC.

**Scope:** To develop a Regional Council that will review the Californian GIS Council's reports, provide recommendations on policy alignment with local and regional needs and be a focal point for partnerships to build California's geographic information infrastructure. The goals will include building consensus on regional area definition; developing a Risk Assessment Plan for success of the region; to be inclusive on the council, of all stakeholders of geographic information system development, implementation, utilization and distribution.

### **SMART Objectives (specific, measurable, achievable, related to division objectives & time bound)**

1. Develop a Regional Council Plan
2. Develop and receive consensus for Regional Plan by majority of sponsors by March 5, 2002.
3. Formation Plan Presentation to Regional Sub Committee Representative, March 6, 2002
4. Distribute BAR Plan to shareholders and solicit BAR membership requests by March 18, 2002
5. Identify BAR Interest group & develop recommendations on 2 year council members. By April 4, 2002
6. Hold the first BAR meeting following the BAAMA meeting April 18, 2002

### Schedule

Estimated Duration 4 mos.

Proposed Start Date: 2/4/01

Proposed Finish Date: April 18, 2002

### Milestones

1. Initiate project
2. Finish contacting potential stakeholders (Counties, regional agencies)
3. Preliminary risk assessment accepted
4. Deliver project plan presentation to sub-committee representative
5. Create agenda for meeting
6. Hold First Formation Meeting

### Dates

2/4/2002  
3/4/2002  
3/5/2002  
3/6/2002  
4/10/2002  
4/18/2002



**Success Criteria / Definition of Completion:**

- Milestones successfully completed.
- Acceptance of plan presented to state CGC Regional coordinator
- Council gets buy-in from stakeholders
- Majority of stakeholders want to meet again after first meeting

**Vision Statement:** Develop a working relationship among regional agencies in the Bay Area to review the California Geographic Information System (GIS) Council’s reports, provide recommendations on policy alignment with local and regional needs and be a focal point for partnerships to build California’s geographic information infrastructure. The Council will help to identify, compile and coordinate the business functions of the regional and local agencies with respect to the use of GIS data. The Council will meet regularly facilitate the discussion, development and implementation of opportunities to develop GIS data and data models.

**Assumptions & Constraints Assumptions:**

- 1) BAR will have sufficient participation from 9 Counties to allow for regional representation at the State Council
- 2) Funding will be found to permit development of a regional council
- 3) Money can mitigate some of risks

**Constraints:** 1) Buy in from organizational leaders to support regional council. 2) Funding may be difficult during this period. 3) Most GIS coordinators/managers are already over-committed.

**Major Resources:**

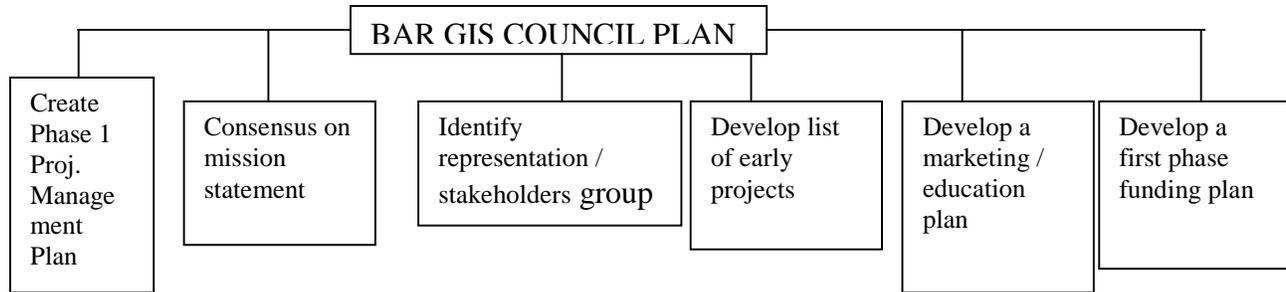
Contra Costa County GIS coordinator, BAAMA, ABAG, MTC, State GIC Council, City of Berkeley

**Risk Management Overview (3-5 Major Risks)**

<u>Major Risk</u>	<u>Prob</u>	<u>Impact</u>	<u>Avoidance</u>
Having buy-in from enough stakeholders (Counties)	40%	High, stake holders won’t participate	Good marketing, communication, organized meetings, early wins (deliverables)
Not finding a good facilitator	30%	High, stakeholders could lose interest	Identify a well qualified person to help facilitate input from the stakeholders.
Not clearly identifying potential benefits	50%	Moderate, Half-hearted participation	Close work with state/stakeholders to identify opportunities (funding, support, etc..)
Stakeholders not having enough time to participate	40%	High, success of program requires majority of entities	Providing stakeholders with a clear product(s) to show decision-makers.
Not maintaining good relationship with state GIC	30%	Success of regional group may depend on state funds	Stakeholder analysis both regional and state. Regular good communication w/ state GIC



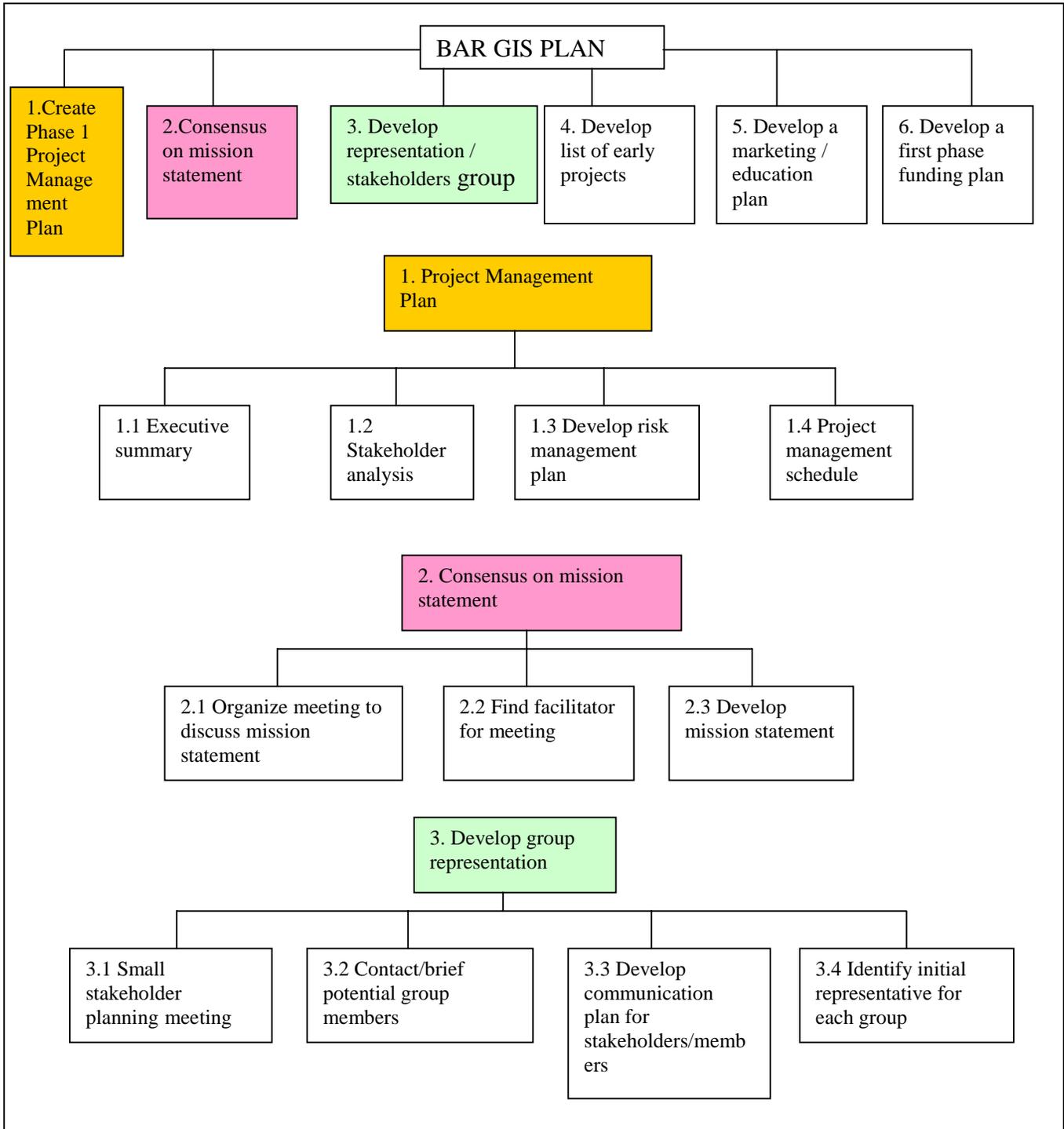
## Work Breakdown Structure (WBS) to level 2



**Other Special Requirements or Considerations:** Most challenging part of project will be to facilitate meetings in order to maximize input from all stakeholders and install a joint feeling of ownership. In addition, it will be important to identify beneficial and marketable milestones that will justify stakeholders' participation to their respective decision-makers.

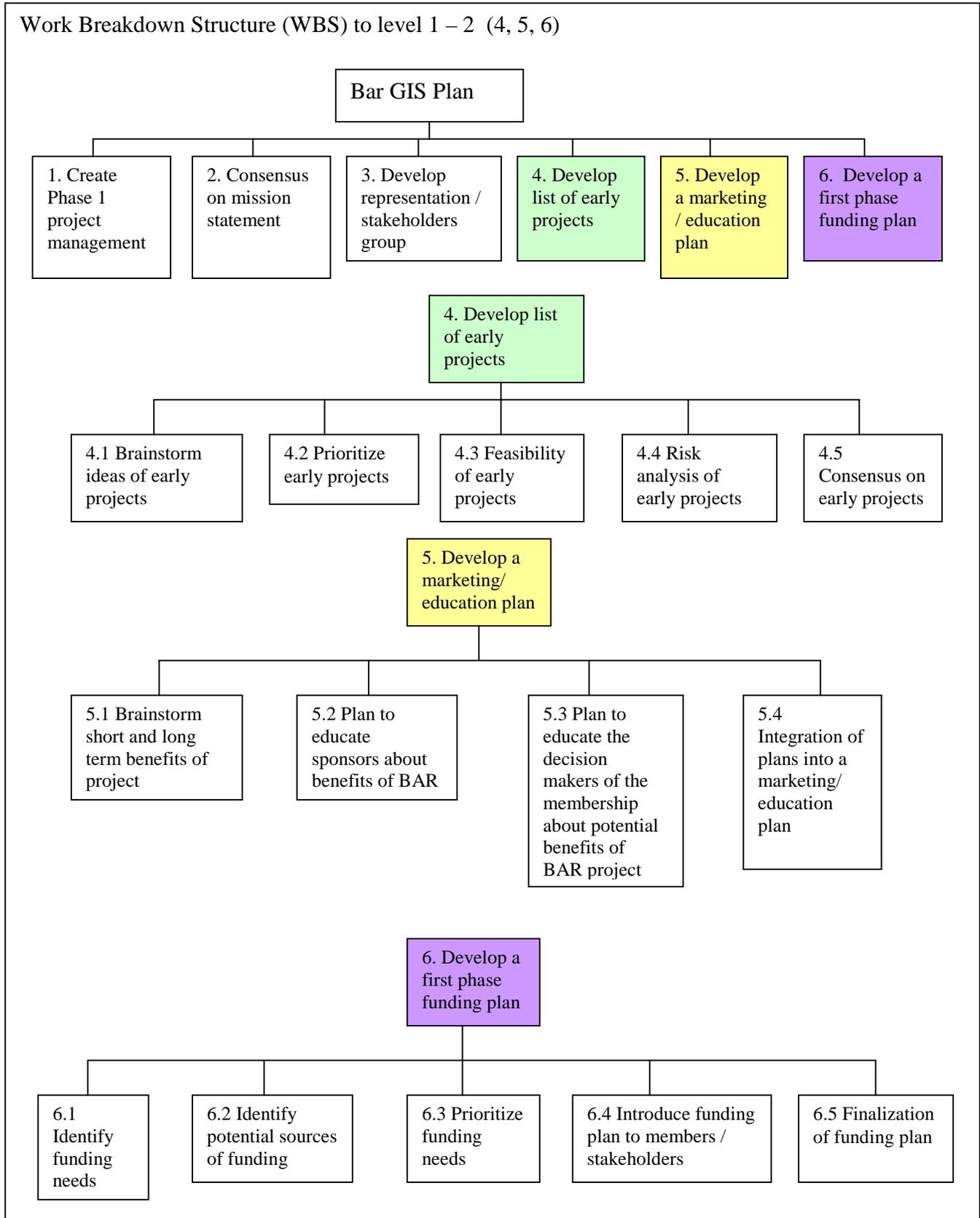


2. Work Breakdown Structure (WBS) to level 1 - 2





2. Work Breakdown Structure (continued)





### 3. List of Possible Risks:

1. Having buy-in from enough stakeholders (Counties, Cities, others) M
2. Not finding a good facilitator M
3. Not clearly identifying potential benefits H
4. Stakeholders not having enough time to participate H
5. Project champions having enough time to organize and coordinate H
6. Not maintaining good relationship with CGC M
7. Challenge of integrating multiple formats of GIS data for any given layer M
8. Challenge of developing data models M
9. Challenge of developing GIS policy H
10. Insufficient funding within state to help regional efforts L
11. Insufficient funding within state to move CGC forward L
12. Competition between local/regional agencies for money or resources M
13. Not developing trust between agencies M
14. Past history between groups M
15. Participants not willing to compromise on issues M
16. Not identifying short and long terms goals M
17. Marketing the coordination effort effectively M
18. Insufficient support by regional stakeholders to follow through with identified projects M
19. Changing priorities among participants and CGC can effect cohesiveness and focus M
20. Lack of understanding by decision makers of long and short term goals of BAR GIS Council M
21. Lack of understanding by public/clients of participants of importance of effort M
22. Ability to maintain probable website to share results L
23. Mechanics of coordinating data with existing varied data sharing policies within region H
24. Parasitic stakeholders; individuals or groups trying to "torpedo coordination effort M

#### Severity of Risks

- H High
- L Low
- M Medium



## Section 4. General Risk Assessment

### Risk Management Overview (General Risk Assessment)

<u>Major Risk</u>	<u>Prob</u>	<u>Impact</u>	<u>Avoidance</u>
Having buy-in from enough stakeholders (Counties, Cities, others)	40%	High, stake holders won't participate	Good marketing, communication, organized meetings, early wins (deliverables)
Not finding a good facilitator	30%	High, stakeholders could lose interest	Identify a well qualified person to help facilitate input from the stakeholders.
Not clearly identifying potential benefits	50%	Moderate, Half-hearted participation	Close work with state/stakeholders to identify opportunities (funding, support, etc..)
Stakeholders having enough time to participate	40%	High, success of program requires majority of entities	Providing stakeholders with a clear product(s) to show decision-makers.
Maintaining good relationship with state GIC	30%	Success of regional group may depend on state funds for future projects.	Stakeholder analysis both regional and state. Regular good communication w/ state GIC
Project champions having enough time to organize and coordinate	25%	Moderate, effort could fall apart if primary organizers leave effort	A good marketing plan of potential benefits of BAR GIS plan to the decision makers is key. The key role that the project champions play is important to point out.
Challenge of integrating multiple formats of GIS data for any given layer	20%	Low, a plan to develop approach can likely be identified.	Communication with other regional and state efforts pursuing the BAR GIS goals plan is key. Input from GIS vendors about possibilities. Consider interoperability standards.
Challenge of developing data models	20%	Low, other data models exist; process to developing new models exists	Good facilitator to conduct needs data model process, help from technically qualified individuals; help from other groups that have worked on these models.
Challenge of developing GIS policy	25%	Moderate, some levels of GIS policy between members will need to be created	Not all issues can be solved. Respect and acknowledgment of differences important. Policies will likely involve compromise. Minimize need to impact other agencies' existing GIS policies.
Insufficient funding within state to help regional efforts	20%	Moderate, State is experiencing large short fall, may cut-back support to the state level effort.	BAR may find local and alternative sources of funding with which to operate and carry out it's initiatives. BAR has the opportunity to provide success stories to the state on the importance of its state GIC effort.



**Section 4 Cont.**

**Risk Management Overview (General Risk Assessment)**

<u>Risk</u>	<u>Prob</u>	<u>Impact</u>	<u>Avoidance</u>
Competition between local/regional agencies for money or resources	10%	Low, might tend to dilute the cohesiveness of the BAR group.	Show membership value of doing grant together and endeavor to structure goal as to cover the most number of groups.
Not developing trust between agencies	20%	Moderate, might create difficulty in getting consensus on goals and objectives	Make sure lines of communication are open. Provide high quality information to membership. Start with small easy to achieve projects.
Past history between groups	20%	Low, past coordination/competition may slow down effectiveness of group	Emphasize “starting fresh” nature of this project; opportunities for long term and short term benefits for all. Identify small pilot projects with high likelihood of success.
Participants not willing to compromise on issues	20%	Moderate, unwillingness to compromise to meet the needs of the group will be very debilitating to success.	Make sure that issues are not from lack of understanding. Allow for ability to disagree and move off to side contentious issues.
Not identifying short and long terms goals	25%	High, this is extremely important to getting participation of members and their respective sponsors	Provide a good facilitator to group for these discussions. Plan the meeting carefully so discussion does not get side-tracked. Make sure meetings notes are collected and distributed.
Marketing the coordination effort effectively	20%	Moderate. Without effective coordination plan, membership interest in project will wane.	Develop an effective communication plan. Update state and other groups regularly on status of process, completion of projects. Present activities at conferences. Give useful feedback to membership to take to their clients.
Insufficient support by regional stakeholders to follow through with identified projects	20%	Moderate, effort may fall apart if membership does not take ownership and responsibility of accepted tasks and assignments.	Project manager needs to be proactive to facilitate memberships participation. Members should not over commit. Projects need to be clearly identified and time to perform evaluated.
Changing priorities among participants can effect cohesiveness and focus	20%	Low, Progress on short and long term goals may suffer if group cannot demonstrate some regular progress.	Develop a clear WBS and Gantt chart of projects to track progress and help gauge participation.
Lack of understanding by decision makers of long and short term goals of BAR GIS Council	15%	Low, membership may have difficulty in getting permission to participate if their decision-makers are not kept informed of progress and successes.	Provide membership with regular updates of accomplishments and milestones of projects to show their respective sponsors.
Lack of understanding by public/clients of participants of importance of effort	15%	Low, public or clients can be post advocates and antagonists of projects efforts.	Provide membership with regular updates of accomplishments and milestones of projects. Explain to public on web and various meetings BAR activities and successes.



**Section 4 Cont.**

**Risk Management Overview (General Risk Assessment)**

<u>Risk</u>	<u>Prob</u>	<u>Impact</u>	<u>Avoidance</u>
Ability to maintain probable website to share results	20%	Moderate, effort needs effective way to communicate it's results. A good web site will reduce other risks	Consider finding funding to create adequate website for this group. Minimize effort to maintain site. Regularly request membership's comments of website and its creation and design.
Mechanics of coordinating data with existing varied data sharing policies within region	20%	Low, will make it more difficult to stitch together data across boundaries or membership.	Working out a regional data sharing agreement that provides flexibility of upholding individual membership's agreement.
Insufficient funding within state to move CGC	20%	Moderate, lack of CGC support may delay development of regional project efforts.	BAR GIS needs to let state know how their support for projects is. Bar should try to get funding from other than state GCG sources.
Parasitic stakeholders. (personal, past history, etc.)	20%	Moderate, could cause the group to lose focus due to negative comments or calculated distractions	Facilitator needs to be watching out for this behavior and control it. BAR organizers need to be aware of the potential for these issues and try to win over this group of stakeholders



## 5. Analysis by Risk Category

These are the numbered risks put into 5 categories of risk developed in a brainstorming exercise.

Communication (1, 3, 6, 15, 17, 20, 21)

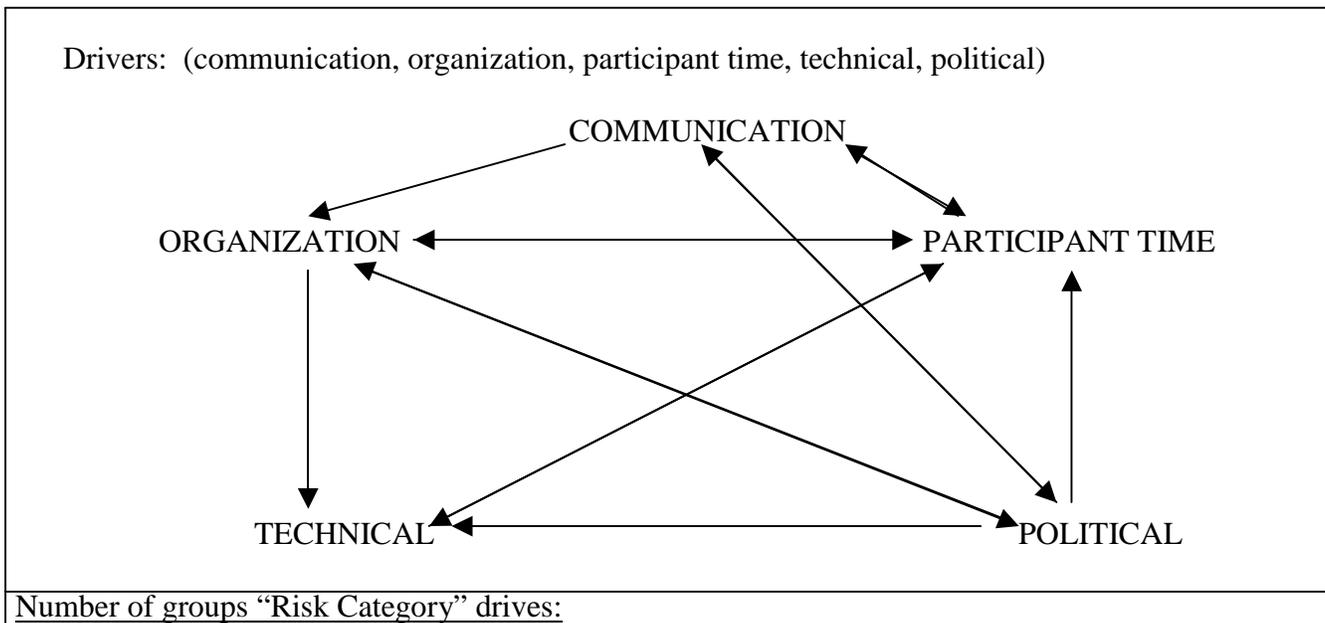
Organization (2, 5)

Political (9, 10, 11, 12, 13, 14, 18, 19, 23, 24)

Participant Time (4, 22)

Technical (7, 8, 16)

The following effort is a graphical method to look at which category drives or is driven by another category of risk:



Participant Time	3
Communication	3
Organization	3
Political	4
Technical	1



Discussion:

The purpose of this analysis was to look at the number and type of interdependencies among the various risks. The goal is to identify, that if by taking care or reducing some category of risk, that other potential risks might be likewise reduced. The 24 potential risks were grouped together into risk categories (communication, organization, participant time, technical and political). A diagram was then used to show which kinds of risks drove other activities. A summary of these probable dependencies is shown above. It seems that the political type of risks (rank of 4) drive the most number of other risks. The recommendation is that focusing on the suggested avoidances for the political risks will diminish the other major categories. The category of risk, political, also contains the highest number (10) of individual risks.

The next group of risks in number of individual risks is the communication category (6). It is also pretty clear that focusing on the #3 risk related categories (participant time, communication and organization) will also be very useful.

Method 2 Risk Analysis by Weighted Probability

This method takes a look at the possible (1) probability of the various risk and (2) the severity of risk in three general categories (High, Medium, Low). I have given a weight of 3, 2 and 1 to these severities respectively (H, M, L). I have multiplied the probability of a risk times its severity value. This was done for each of the 23 listed risks:

Example Risk #1 Having buy-in from enough stakeholders.

Moderate risk and probability of 40%  
2 x .4 = 0.8

Summing up all the weighted risks per category:

Weighted Risk Probability:		Sum
Political	(0.75, 0.6, 0.6, 0.2, 0.4, 0.4, 0.4, 0.4, 0.6, 0.4)	4.75
Communication	(0.8, 1.5, 0.6, 0.4, 0.4, 0.3, 0.3)	4.3
Participant Time	(1.2, 0.4)	1.35
Organization	(0.6, 0.75)	1.35
Technical	(0.4, 0.4 0.5)	1.3

This method of risk analysis suggests that the highest amount of risk (weighted probability) comes from the category of risk characterized by "political". This category also contains the largest number of risks (10) in the 5 groups. Clearly, this effort has a lot of potential landmines. However, by developing a strategy to avoid and mitigate a number of these risks, the effort will reduce the area of greatest overall risk.



As suggested previously, this category of risk also helps drive all the other categories of risk. Following the avoidance methods listed and reviewing regularly the success of these mitigations will be very helpful in reducing this area of risk and by extension it's influence in the other areas.

Communication risk is a close second, and probably at least as important as the politics. Two of the largest single risks are #3, not clearly identifying potential benefits (1.5) and #1, having buy-in from enough stakeholders (county, cities and others (0.8). This category also contains the second largest number of risks (6) in the 5 groups. As this group meets and tries to develop into a cohesive group, the art of listening to each other will be equally as important to what is actually said. What is not said and analysis of the stakeholders' body language will be helpful in the formation of this group.

The categories of participant time and organization are basically the same in terms of weighted probability of risk. "Participants having enough time to attend these meetings and work together on solutions will be greatly facilitated if they are made to feel the meetings and activities are well organized. They must also be given marketable short and long term goals to take back to their respective organization managers and decision makers.



## 6. Summary of Risk Analysis:

Much of this risk identified in this report is qualitative. The highest risk is for the participating agencies to provide enough time for their representatives to be effective. In order to allow for this, benefits to the individual agencies in terms of time and money saved (or grants) will need to be developed. The participants need to be given a probable list of short and long term benefits to the participants their decision makers and the people that the agencies support. Marketing these opportunities to decision makers for GIS development, leading to enhanced business function for the agencies will be crucial. Developing agreement on identification of short term and long term goals will be important.

Finally, the coordination meetings themselves will need to be carefully planned and run in a well organized way. A project plan will need to be developed and implemented by a project manager to ensure the greatest success of this first meeting. Objectives, agendas and minutes will need to be developed and distributed as a part of the facilitation/communication plan. These risks associated with this project have been categorized and analyzed in several ways. This project will have a higher chance of success if the risk categories that drive other risks are reduced. The project manager will need to regularly reevaluate the effectiveness of the avoidance and risk mitigation methods in reducing risk. This project should have a high probability of success if the primary driver risks and highest (in terms of weighted probability) specific risk discussed are successfully managed.