ESADE

# Alice Rap Network Evaluation Survey

**(Area 7: Work Package 20)**

Institute of Public Governance and Management
ESADE Business School
www.esade.edu/public


**SPSS and UCINET Analysis of the Survey**

## INTRODUCTION

This document presents the results of ALICE RAP Network Evaluation Survey, one of the tasks of WP20. The survey takes into consideration four dimensions of the complex governance of networks: (1) Network Management; (2) Participation in the network (3) Goals and results; (4) Key future factors.

WP20 aims to keep track of the ALICE RAP network, assess the work and analyze the synergies and potentialities of the network, through three waves of surveys and resulting network analysis. Concretely, the objective is to acquire an overview of the factors that influence collaborative work in the project from a management point of view, and their relative impact on output. In this respect, the four aims of the survey are: (1) To analyse the structure of the network and how is managed; (2) To map the evolution of the connections among Alice-Rap participants during the project; (3) To extract the maximum possible number of latent synergies; (4) To find new channels and spaces for cooperation and joint project development.

After providing some general information on the ALICE RAP participants, the first part of the document presents the survey's quantitative results and the second part is devoted to the Social Network Analysis of ALICE RAP Network. Finally, the document closes with a discussion and draws some general conclusions.

## GENERAL INFORMATION

- Defined universe: 153 people
  - 136 European Scientists
  - 14 Global Science Group members
  - 3 Media & Communications Group members
- Pilot test (September 2011): 24 participants (15% of the defined universe)
  - 12 Completed surveys with feedback
- First wave (Nov-Dec 2011):
  - The survey was sent to the remaining 129 participants in the defined universe.
  - The process began in early November and lasted until late December 2011.
  - If not returned in 15 days, a reminder to complete the survey was sent to the participants (up to a maximum of 3 times: mid-November, early December and mid-December).
  - Total completed surveys: 100 => Response rate = 65% of the defined universe.
- Second wave at the mid-point of the project (2013)
- Third wave at the end of the project (2015)

The first wave survey has obtained a high response rate (65%). For some participants it was too early to answer the survey as they had not started any task related to the project.

**Country representation of respondents**

- Spain: 16%
- United Kingdom: 16%
- Italy: 9%
- Finland: 6%
- Germany: 6%
- Norway: 5%
- The Netherlands: 5%
- Others (less than 5%): Slovenia; Poland; USA; Australia; Austria; Bulgaria; Denmark; Scotland; Switzerland; Belgium; France; Hungary; Ireland; Latvia; Mexico; Romania; South Africa; Sweden.

**Age of participants**

- Minimum: 23
- Maximum: 84
- Mean: 48
- Median: 48

**Gender**

- Males: 51%
- Females: 49%

**Education**

- Ph.D.: 60%
- Master degree: 35%
- Undergraduate degree: 5%

**Sector of the organisation**

- A public sector organisation: 66%
- A not-for-profit organisation: 22%
- A private company: 12%

**Role in Alice Rap**

- Undertake research in a WP: 58.3%
- Undertake research and coordinate areas or WPs: 15.6%
- Manage and coordinate: 14.6%.
- Participate as a part of the Media & Communications Group: 6.3%
- Participate as a part of the Global Science Group: 5.2%

**Area Participation of respondents**

- Area 1: 21.4%
- Area 2: 29.4%
- Area 3: 15.2%
- Area 4: 16.2%
- Area 5: 22.4%
- Area 6: 2%
- Area 7: 20.7%

## SURVEY RESULTS

**Participation in Alice Rap**

- Alice Rap Project catalyst:
  - Almost 90% (89.3%) of respondents think that either Peter Anderson or Peter Anderson & Antoni Gual are the project catalysts. This result tells us that the leadership of this project is recognised, visible and well known by the majority of respondents.
  - Other participants named as leaders by some respondents: Anne Lingford-Hughes, Jürgen Rehm, Gerard Bühringer and Virginia Berridge.
  - 4.3% of respondents do not know who the leader of the project is.
- "Experience" and "Vision" are the most highly rated skills of the project leader.
- Benefits from working with other individuals and organisation on the ALICE RAP project were (ranked in order of importance):
  1. More ideas are generated.
  2. Enhanced access to knowledge in other areas (spill over).
  3. Improved personal/professional development.
  4. Better ideas are generated.
  5. Enhanced reputation of my organisation or unit.
  6. Development of new tools, methods, and approaches.
  7. Acquisition of additional funding or other resources.
  8. Able to get project tasks done more quickly.

- Challenges to or arising from working with other individuals and organisations on the ALICE RAP project were (ranked in order of importance):
  1. Insufficient resources to support effective collaboration.
  2. Diversion of time and resources from other activities.
  3. Difficulties due to geographical distances.
  4. Loss of control/autonomy over decisions.
  5. Frustration or aggravation in dealing with partners.
  6. Strained relations within my own organisation.
  7. Insufficient credit given to my organisation or unit.

**ALICE RAP Progress** (bearing in mind that the project has recently started – year 1 out of 5)
Ranked responses - These are the 3 most highly rated answers (and average score) for each of the following statements or topics:

- Respondents mostly agree with the following statements
  (1=Completely disagree / 10=Completely agree):
  - Innovative ideas are being developed during the project: 7.7.
  - The benefits of this cooperation outweigh its costs: 7.6.
  - The various stakeholders in the project are contributing to achieving results: 7.
- Participants were asked to rate the interaction of the various parties in ALICE RAP project (1=Completely disagree / 10=Completely agree):
  - Multiple individuals are involved in managing ALICE RAP: 8.2.
  - ALICE RAP is being managed actively: 8.
  - The participants assume that the other actors involved have good intentions: 7.9.
- Regarding management (1=Completely disagree / 10=Completely agree):
  - The leaders of the project consult with the people carrying it out. Decisions are being made collectively: 7.

- The leaders of the project take into account existing interpersonal relationships, their basis, and how they are generated and developed: 7.
- When a deadlock is reached or problems arise in the project, the management tries to find common ground between the positions of the conflicting interests: 7.

- Trust:
    - Trust between parties involved in ALICE RAP: average of 6.9 (out of 10).
    - Trust between the various parties involved in your particular area of engagement: average of 7.2 (out of 10).

Trust, both in ALICE RAP in general and in the particular area of engagement, of most respondents is high. Nonetheless, what is really remarkable is that participants have higher levels of trust in their particular area of involvement (which may be explained by their higher levels of interaction). This is good news since this is the group of people with whom participants are working.

- Respondents' contribution to ALICE RAP:
    - Has increased: 39%
    - Has not changed: 56%
    - Has decreased: 4%
- The managerial capabilities in ALICE RAP:
    - Have increased: 22%
    - Have not changed: 76%
    - Have decreased: 1%
- Your trust in ALICE RAP:
    - Has increased: 25%
    - Has not changed: 70%
    - Has decreased: 4%
- Number of partners or organisations involved in the area in which you have more engagement:
    - 4 or fewer: 21%
    - 5 to 9: 43%
    - 10 to 14: 17.5%
    - 15 to 19: 7.5%
    - 20 or more: 11%

The majority of respondents participate in areas with less than 10 partners or organisations. This fact has to be considered as positive since a small number of participants facilitate the management of the area, i.e. it is easier to coordinate, to contact and to manage the area.

- Questions about complexity of the network (1=Completely disagree / 10=Completely agree) (ranked in order of importance):
  1. There is strong emphasis on learning from the experiences and insights of others: 7.3.
  2. I depend greatly on other parties to achieve my goals: 7.1.
  3. Parties in the network have significant differences of opinion about the direction of the project: 5.9.
  4. Many unexpected events and changes have taken place in the network: 5.3

Regarding the complexity of the network, the outstanding results are that participants depend greatly on other parties to achieve their goals, while, at the same time, there are not big differences of opinion about the direction of the project.

**Alice Rap objectives and results**

- Participants were asked to rate the objectives which have had the most influence on respondents' organisations' participation (ranked in order of importance):
  1. Creates contacts with other organisations.
  2. Patents and publications
  3. Lobbies translational results into public policies
  4. Facilitates Resources
  5. Enhances Transnational Research
  6. Contact with other organisations

- Participants were asked to rate which objective has had the most influence on their own individual participation (ranked in order of importance):
  1. Opening up to interdisciplinary and inter-organisational views.
  2. Potential to become involved in future projects.
  3. Knowledge transfer.
  4. Publications.
  5. Having other views on aspects of certain programmes.
  6. Funding.
  7. Expansion of management skills.
  8. Prestige.
  9. Influence/Lobbying.

- Main obstacles to success (ranked in order of importance):
  1. Financial situation of some partners.
  2. New priorities.
  3. Partners conflicting.
  4. Changes to political agenda.
  5. Changes necessary in the parent organisation.

- Average rating of importance of the successful completion and implementation of ALICE RAP to the overall mission of each respondent's organisation: 6.4/10.

- 17% of respondents had started to work on research articles with other ALICE RAP participants since the beginning of the project.

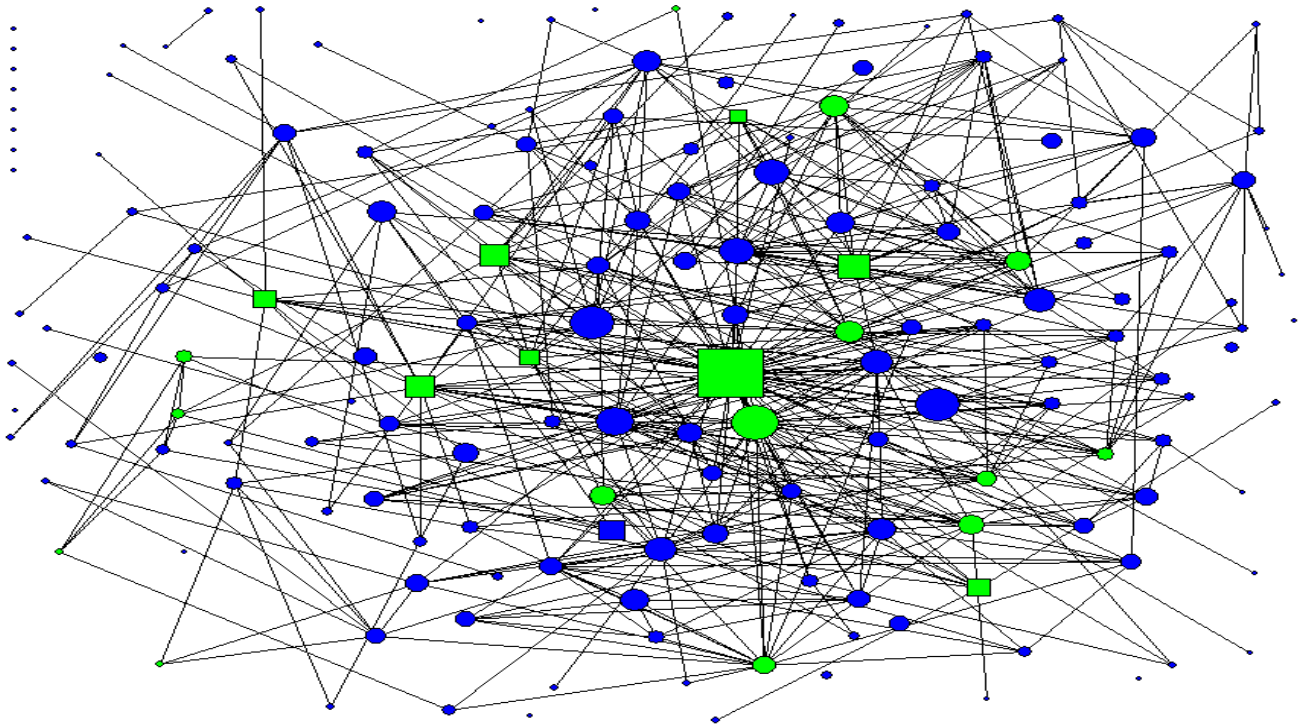
- Rating of the OUTPUTS generated by Alice Rap: 4.9/10.

- Rating of the OUTCOMES generated by Alice Rap: 4.2/10.

The early stage of the project may justify this low percentage of respondents who have started to work on research articles. Nonetheless, as a research project, one of the main indicators to assess its effectiveness will be the number of publications and their mean impact factor.
Similarly, both the rating of outputs and outcomes are below 5 out of 10. Again, this may be because of the early stage of the project.

## ALICE RAP SOCIAL NETWORK ANALYSIS (SNA)

### DIAGRAM 1: ALICE RAP NETWORK



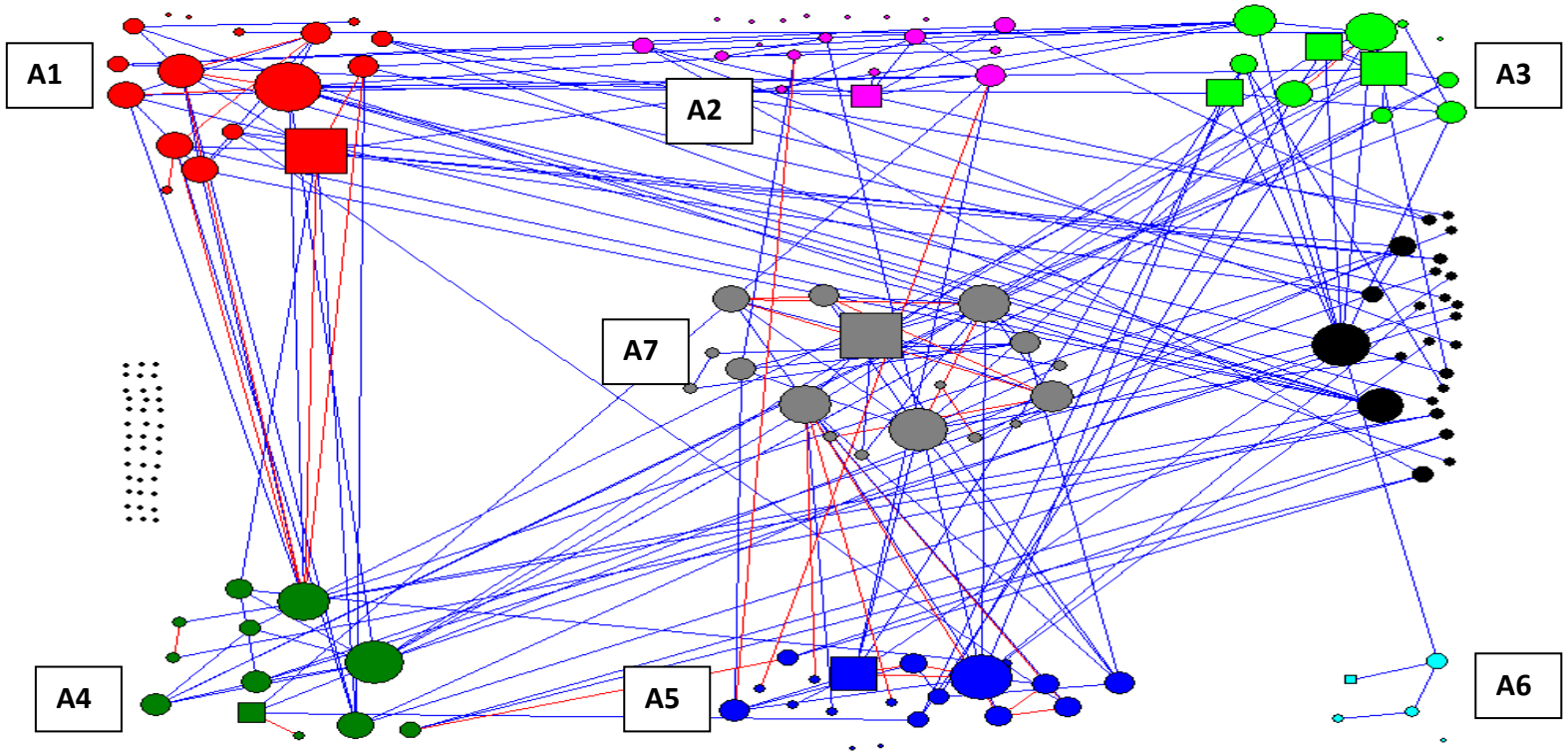
| | |
|---|---|
| □ | Area Leader |
| O | Participant |

| Nodes | |
|---|---|
| | Alice Rap Participants |
| | WP Leaders |
| Response Rate | 65% |

| Network Density | | | |
|---|---|---|---|
| Relation | 2.1% | Relation (I go to this person) | 5.5% |
| Relation Communication | 0.6% | Relation (This person comes to me) | 5.0% |
| Relation Coordination | 0.6% | Isolated Participants | 4.2% |
| Relation Collaboration | 0.9% | | |

Diagram 1 presents all ALICE RAP participants, i.e. those who have answered the survey and those who, even if they have not answered the survey, have been named by some respondent.
Despite having a definite universe of 153 people, the SNA reports on 165 people. This is because some respondents named people of their own department who still have not been included in the definite universe, or who are not directly involved in the project.
Each node represents an ALICE RAP participant. The size of the node is directly linked to its centrality. In this respect, the more times a person is named the bigger is its node.
The lines (or ties) indicate that there is some kind of relation between participants.
Squares and green nodes represent area leaders and work package leaders respectively. As can be seen, both are well connected in the network and none of them is isolated.

## DIAGRAM 2: MAPPING CONNECTIONS BETWEEN AREAS




| | |
|---|---|
| □ | Area Leader |
| O | Participant |

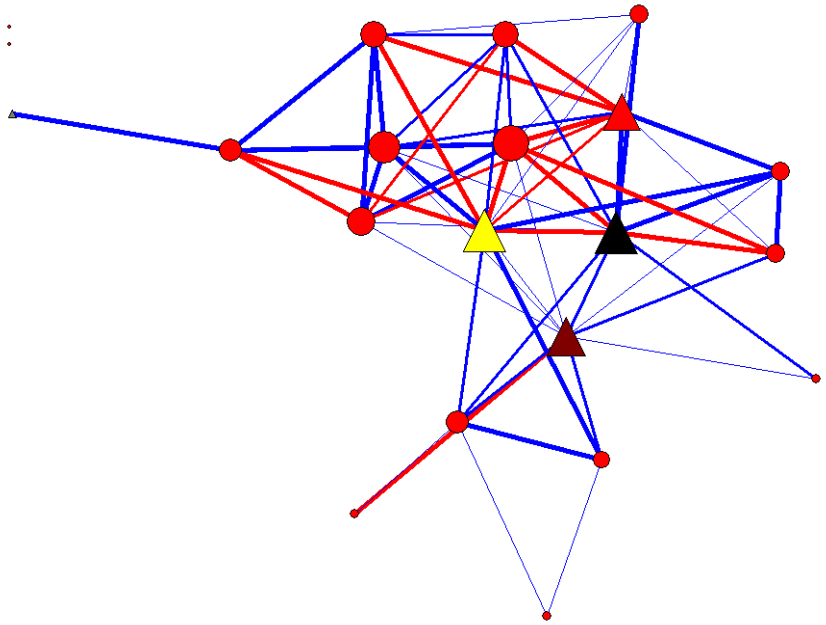
| Nodes | | | |
|---|---|---|---|
| Not specified | | Area 4 | |
| Area 1 | | Area 5 | |
| Area 2 | | Area 6 | |
| Area 3 | | Area7 | |

| Tie strength: Collaboration (max. level) | |
|---|---|
| Reciprocal Ties | |
| Non-Reciprocal Ties | |

Diagram 2 presents the interaction between the different Work Areas of the ALICE RAP Project.
In this case, the diagram only takes into account the highest level of relations (there are three different levels of relation: Communication, Coordination and Collaboration, the last one being the maximum level of relation). Furthermore, if the line is red it means that the collaboration is reciprocal (with both respondents confirming the relation).
Black dots or nodes at the middle of the diagram (both to the left and the right of the page) are those participants who have not specified which Area they are working in. On the left, we present those who, in addition, do not have relations of collaboration with other participants, while to the right-hand side can be seen those who, despite not having specified their area of work, have interactions with different ALICE RAP participants. Nonetheless, in order to improve future survey results, it is necessary that participants specify their project work Area.

## IN-DEPTH INFORMATION PER AREAS

### DIAGRAM 3: AREA 1



| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A1 Participants | | Area Leader | | Reciprocal Ties |
| | Also in A7 | | Highest level of betweenness | | Non-Reciprocal Ties |
| | WP Leaders in other Areas | △ | Area and WP Leaders | | |

Area 1 is a cohesive network, most of the nodes are well connected, and most of the ties are wide[1]. The sizes of the nodes also reflect that participants in this Area are well connected and have good levels of centrality. Furthermore, the percentage of lines which are reciprocal stands out, which may indicate not only a good levels of communications inside the area, but also good relationships between their members.

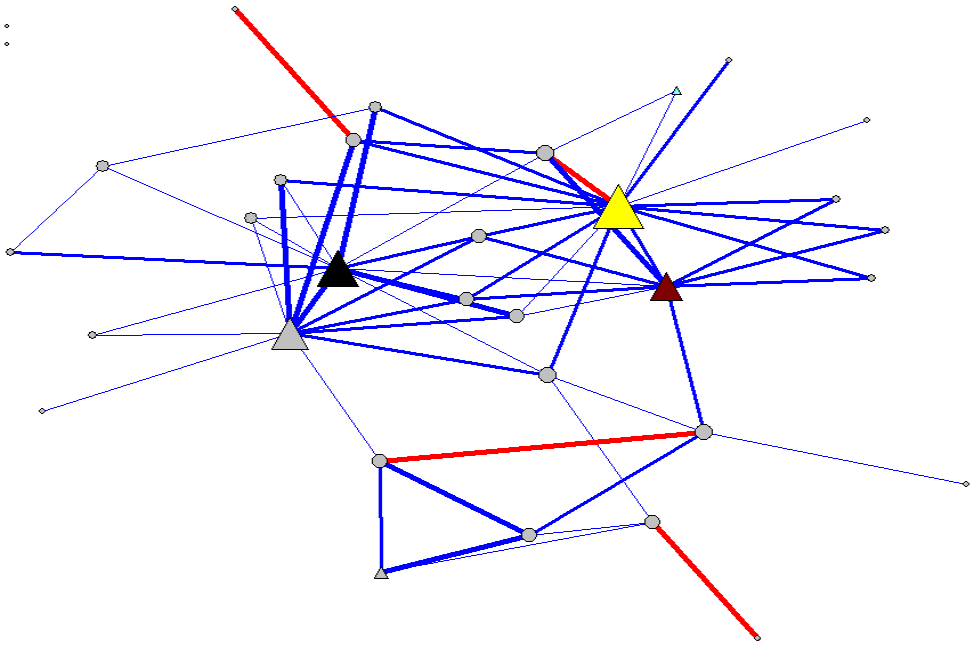
It is also important to highlight that both the Area leader and the WP leaders occupy the centre of the network and are very well connected with the Area participants. Nonetheless, the relation between the WP leaders could be improved.

As can be seen, the person with the highest level of betweenness[2], that is, the person who can be used as a bridge to connect different participants of the network, is not the Area leader. This is not strange, since it happens in most of the Work Areas of the project. On the other hand, the Area depends too much on the person with the highest level of betweenness, i.e. without this person, the risk of fragmentation of the members at the bottom of the network would increase.

[1] The width of the ties reflects the level of relation: communication, coordination or collaboration. The wider the lines, the higher are the levels of relation.

[2] Betweenness centrality places an actor as being in a favored position to the extent that the actor falls on the geodesic paths between other pairs of actors in the network. That is, the more people depend on me to make connections with other people, the more betweenness I have. If, however, two actors are connected by more than one geodesic path, and I am not on all of them, I lose some betweenness.

**DIAGRAM 4: AREA 2**



| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A2 Participants | | Area Leader | | Reciprocal Ties |
| | Also in A7 | | Highest level of betweenness & WP Leader in another Area | | Non-Reciprocal Ties |
| | WP Leaders in other Areas | △ | Area and WP Leaders | | |

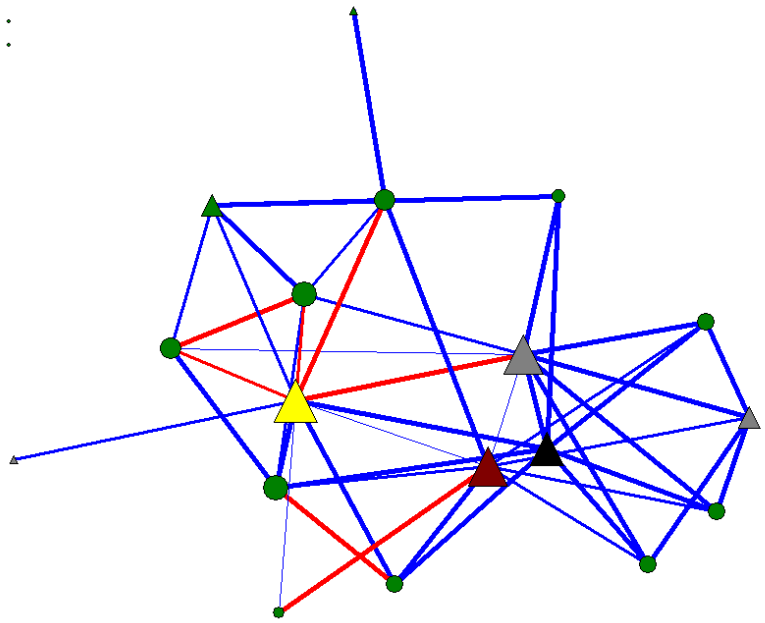
At first glance Area 2 is characterised by a high percentage of non-reciprocal ties. Moreover, the sizes of the nodes are significantly smaller than in Area 1, which indicates that these participants have lower levels of centrality.

It is worth noting that one of the WP leaders is badly connected to the central network; concretely this cluster is placed at the bottom of the diagram. This fact jeopardizes the cohesion of the network, if connections with the central network are not enhanced. In this respect, one can see that there are two different groups inside this Area which, in turn are not very cohesive.

The participant with the highest level of betweenness is not a member of the Area.

There are also some shortcomings in the relation between the leaders of the Area, which in some cases do not exist. The network analysis also shows that the relation between leaders and participants is hierarchical and not very collaborative.

**DIAGRAM 5: AREA 3**

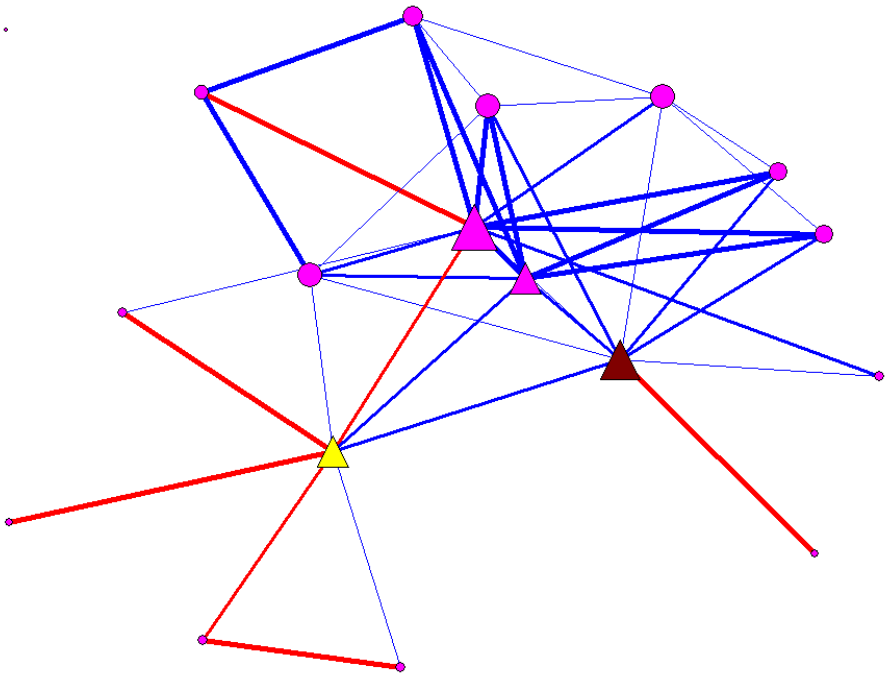


| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A3 Participants | | Area Leader(s) | | Reciprocal Ties |
| | Also in A7 | | Highest level of betweenness | | Non-Reciprocal Ties |
| | WP Leaders in other Areas | △ | Area and WP Leaders | | |

According to the results of the survey, and as it can be seen in Diagram 5, Area 3 has a good level of cohesion, there is no risk of network fragmentation and most of the Area 3 participants are well connected. Despite the predominance of non-reciprocal ties (especially to the right of the diagram), the diagram shows some reciprocal ties which, if reinforced, may enhance the potentialities of the network.

Regarding Area and WP leaders, they seem to be well connected; nonetheless, the Area is too dependent on the participant with the highest level of betweenness. This dependency may represent a risk to the network. However, the good relations between leaders and participants may lead to high-quality performance of the network.

**DIAGRAM 6: AREA 4**

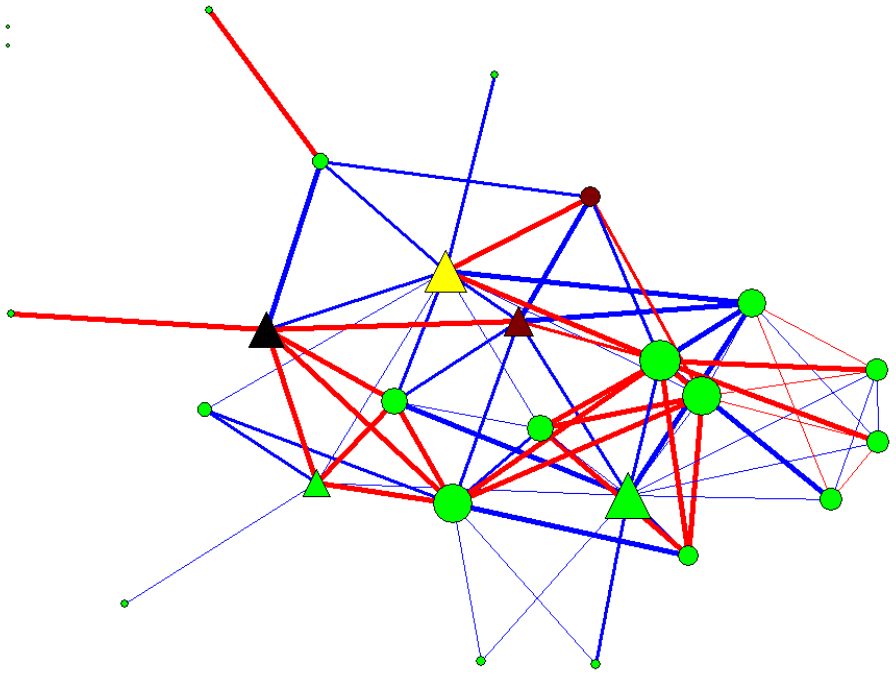


| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A4 Participants | | Area Leader & Highest level of betweenness | | Reciprocal Ties |
| | Also in A7 | △ | Area and WP Leaders | | Non-Reciprocal Ties |

Area 4 is characterised by a low level of cohesion. There is some risk of fragmentation if the participant with the highest level of betweenness (which is also the Area leader) disappears. Despite not having the highest level of betweenness, the WP leader at the middle of the networks seems to be better connected with Area participants. It is also noteworthy that the network could have better relations *between* leaders and that the relations between leaders and participants are mostly hierarchical.

As mentioned, the Area leader is also the person with highest level of betweenness. However, as can be seen, this fact does not imply *per se* a better functioning of the network.

**DIAGRAM 7: AREA 5**

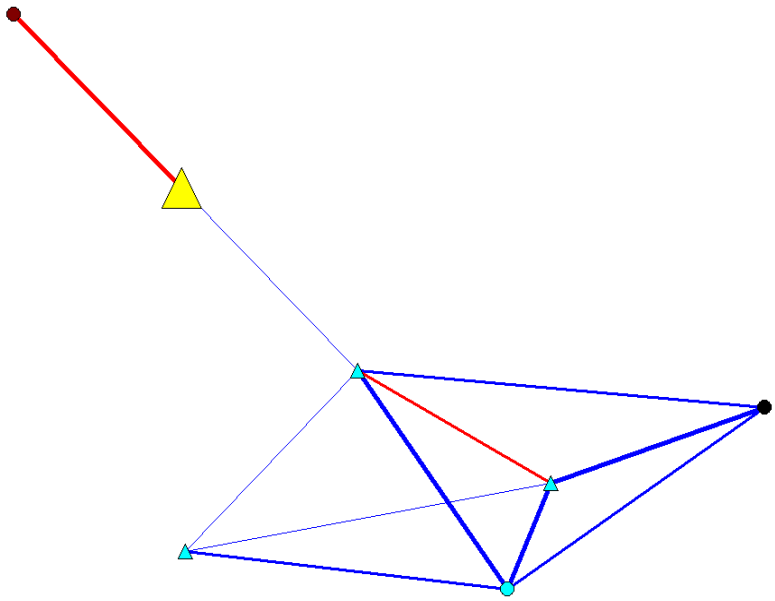


| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A5 Participants | | Area Leader | | Reciprocal Ties |
| | Also in A7 | | Highest level of betweenness & WP Leader in another Area | | Non-Reciprocal Ties |
| △ | Area and WP Leaders | | | | |

The Area 5 network, jointly with Area 1, has the highest level of cohesion and greater potential for good performance. The relations between leaders and participants are good, but relations between leaders could be improved. It is also worth noting that relations between regular participants are numerous and intense.

Comparing with the other Areas, this network has the highest levels of reciprocal ties, which may mean either that there is a good relation between Area participants, or that there are inefficiencies in the proper use of the network (not taking advantage of its potentialities in the exchange of information).

**DIAGRAM 8: AREA 6**

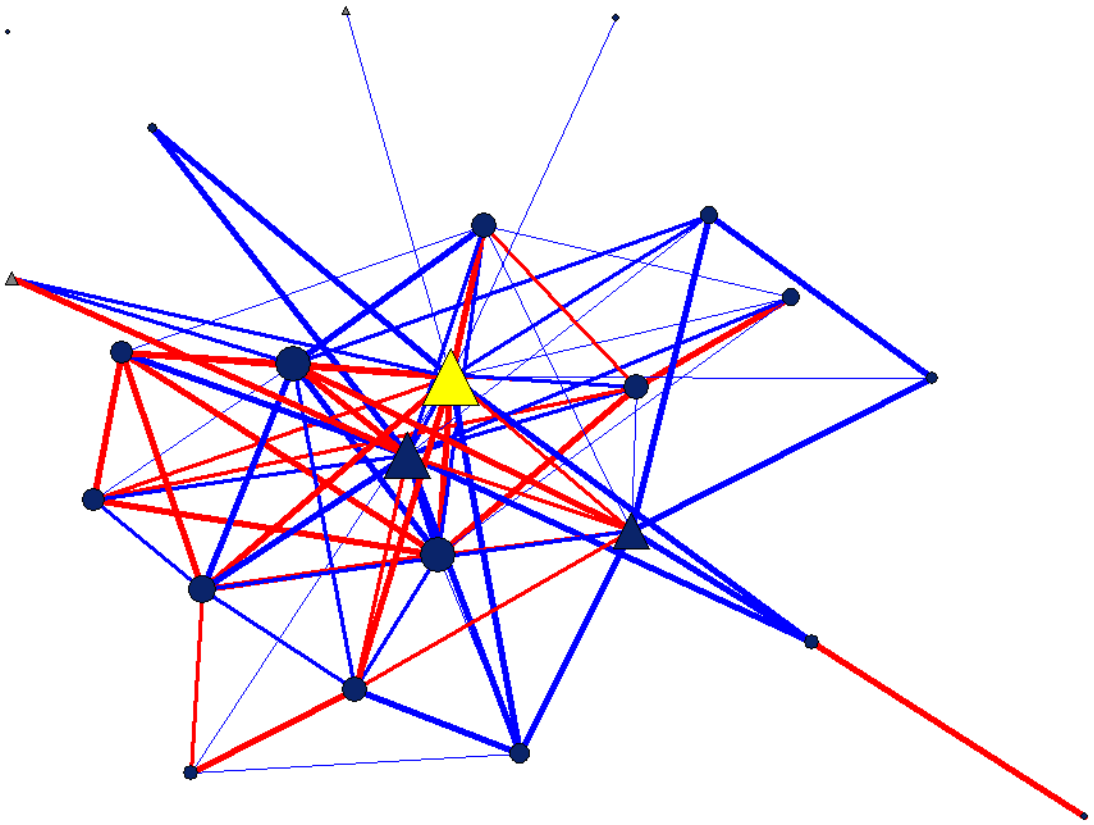


| Nodes | | | | Ties | |
|---|---|---|---|---|---|
| | A6 Participants | | Area Leader | | Reciprocal Ties |
| | Also in A7 | | Highest level of betweenness & WP Leader in another Area | | Non-Reciprocal Ties |
| △ | WP Leaders | | | | |

Regarding Area 6, it is worth start noting that very few participants responded the survey (only 2% of the total respondents were form area 6). There is only one Area 6 participant who is neither an Area nor WP leader, which may reflect the low degree of involvement of participants in this network. However, and despite the few participants in this network, the relations between them are few and mostly non-reciprocal.

It is noteworthy that this is the only area where the Area leader is not involved as leader in any WP. This fact should not be considered as a precondition for weak networking, but it must be taken into account.

**DIAGRAM 9: AREA 7**



| Nodes | | Ties | |
|---|---|---|---|
| | A7 Participants | | Reciprocal Ties |
| | Highest level of betweenness & WP Leader in another Area | | Non-Reciprocal Ties |
| △ | Area and WP Leaders | | |

The Area 7 network is the most cohesive one. As can be seen, there is good relation between all participants (including Area and WP leaders).

As in Area 4, the Area leader is also the participant with the highest level of betweenness. Furthermore, relations between leaders, leaders and participants and between participants themselves are very good.

## DISCUSSION

All results presented in this document have been extracted from the first wave of ALICE RAP Network Evaluation Survey conducted between September and December 2011. Firstly, it is important to note that the early stage of the project may produce some bias on the results; nonetheless, it is important to have this first reference in order to use it as a benchmark for the second and third survey waves, which will be conducted at the mid-point and at the end of the project.

One of the consequences of the early stage of the project is that some participants did not answer because they have not started any kind of task related to ALICE RAP. However, the response rate (65% of ALICE RAP participants) is considered high, and it is worth noting that, in social sciences, results above 35% can be considered reliable. Nonetheless, we strongly encourage all ALICE RAP participant to participate in the future survey waves.

At a glance, results obtained are positive, only outputs and outcomes still have low results, which is, again, likely to be due to the early stage of the project. Apart from that, most of the results obtained from the survey have to be considered as positive.

Regarding the Social Network Analysis, first of all it is important to note that ALICE RAP network cohesion and density is high especially if we bear in mind that there are 165 participants and that this project is divided into Areas and Work Packages. Some weaknesses have been detected in different Areas which may be properly tackled and corrected in order to promote its potentialities. Here, Area and Work Package (WP) leaders' roles are determinant in searching for synergies inside the Area and enhancing different kinds of relations between Area and WP participants. Furthermore, Area and WP leaders can also encourage relations across Areas. As can be seen in Diagram 2, these already exist; but further development of these links can be used as leverage for trans-disciplinary research, one of the core aims of the project. In general, results obtained from the SNA can be considered positive and most of the Areas have strong potential for good performance. However, participants, and especially Area and WP leaders, must continue collaborating and finding synergies to strengthen the network in order to reach the desired outcome.