

A PRIMER ON DRI

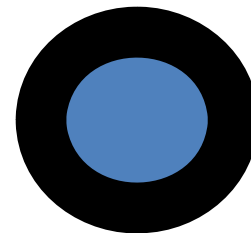
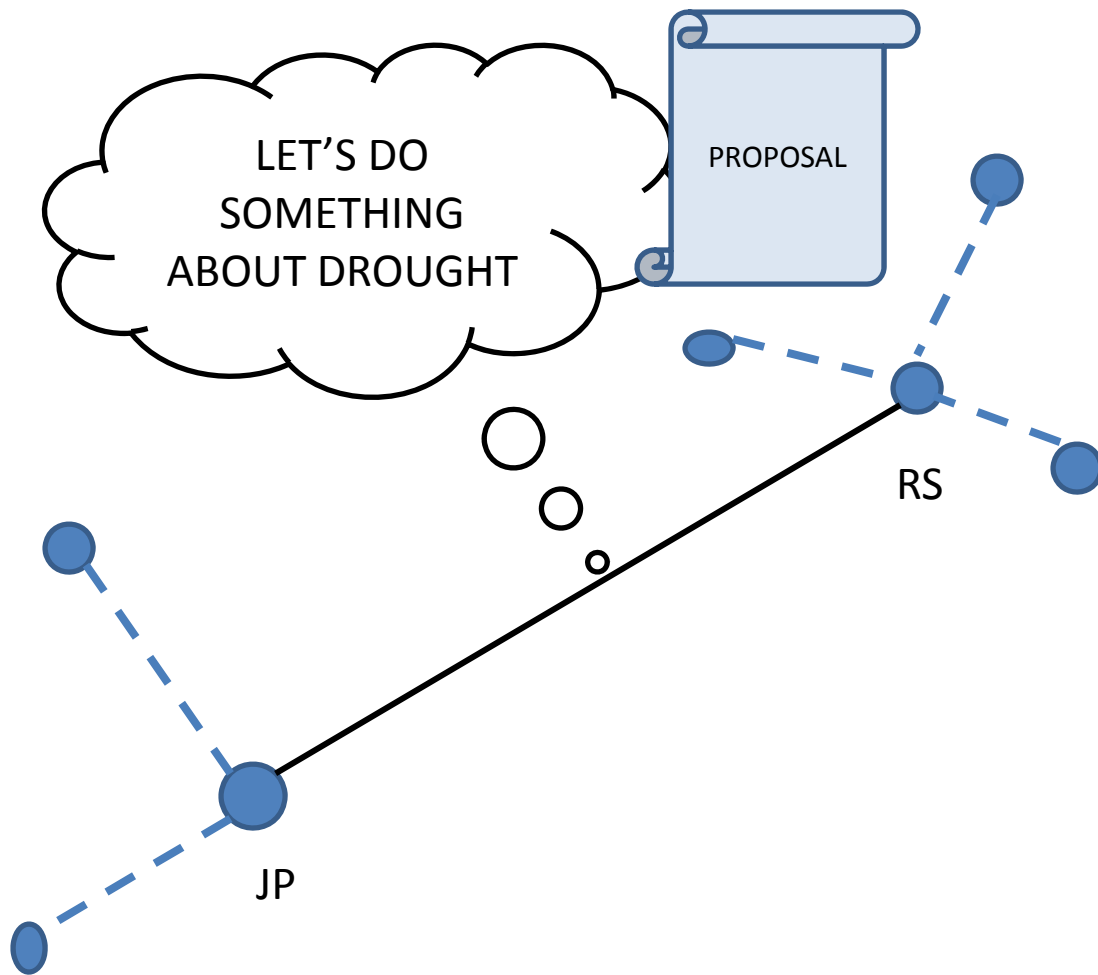
Rick Lawford

DRI Workshop

Calgary

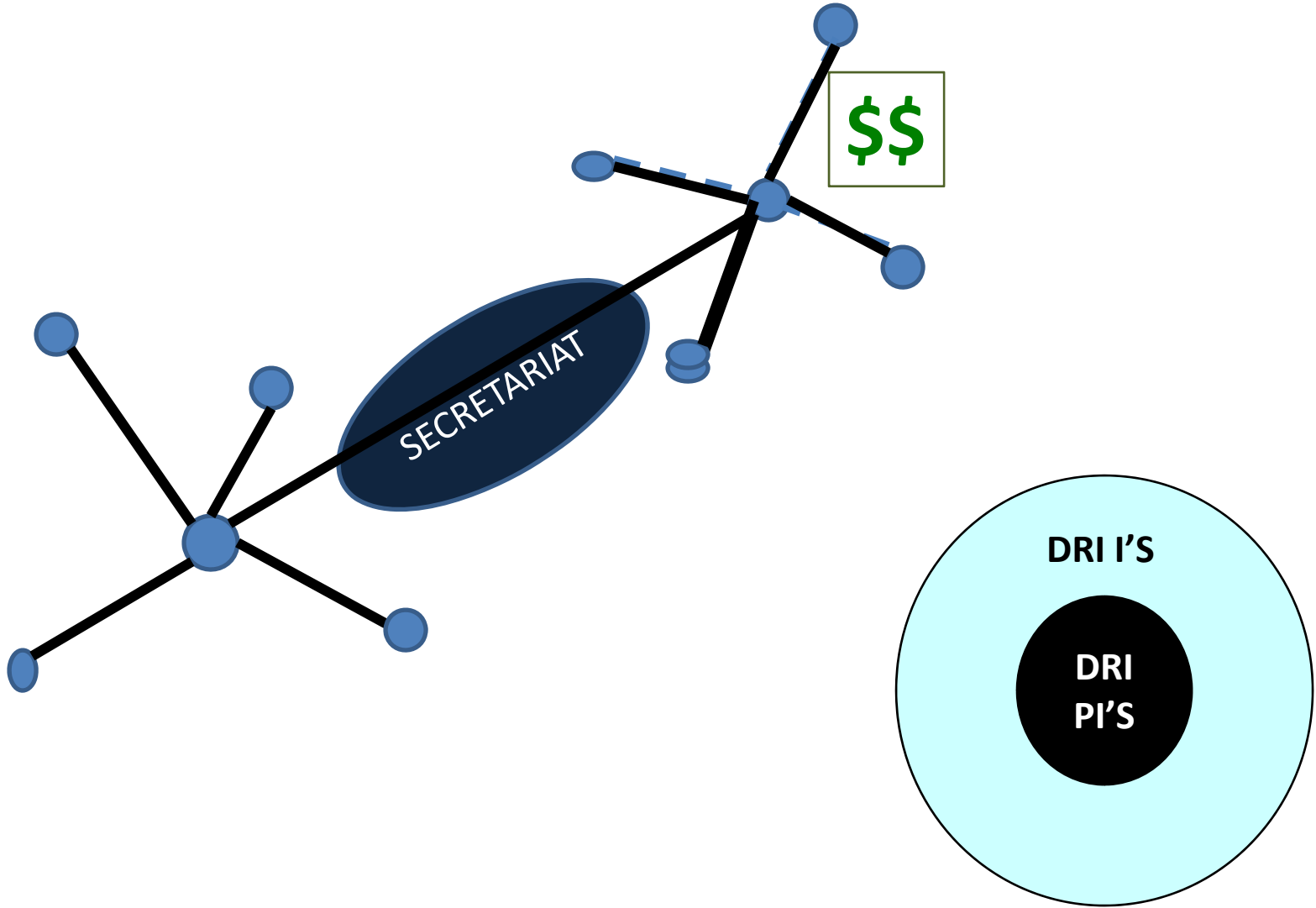
January 17, 2008

BUILDING THE DRI NETWORK

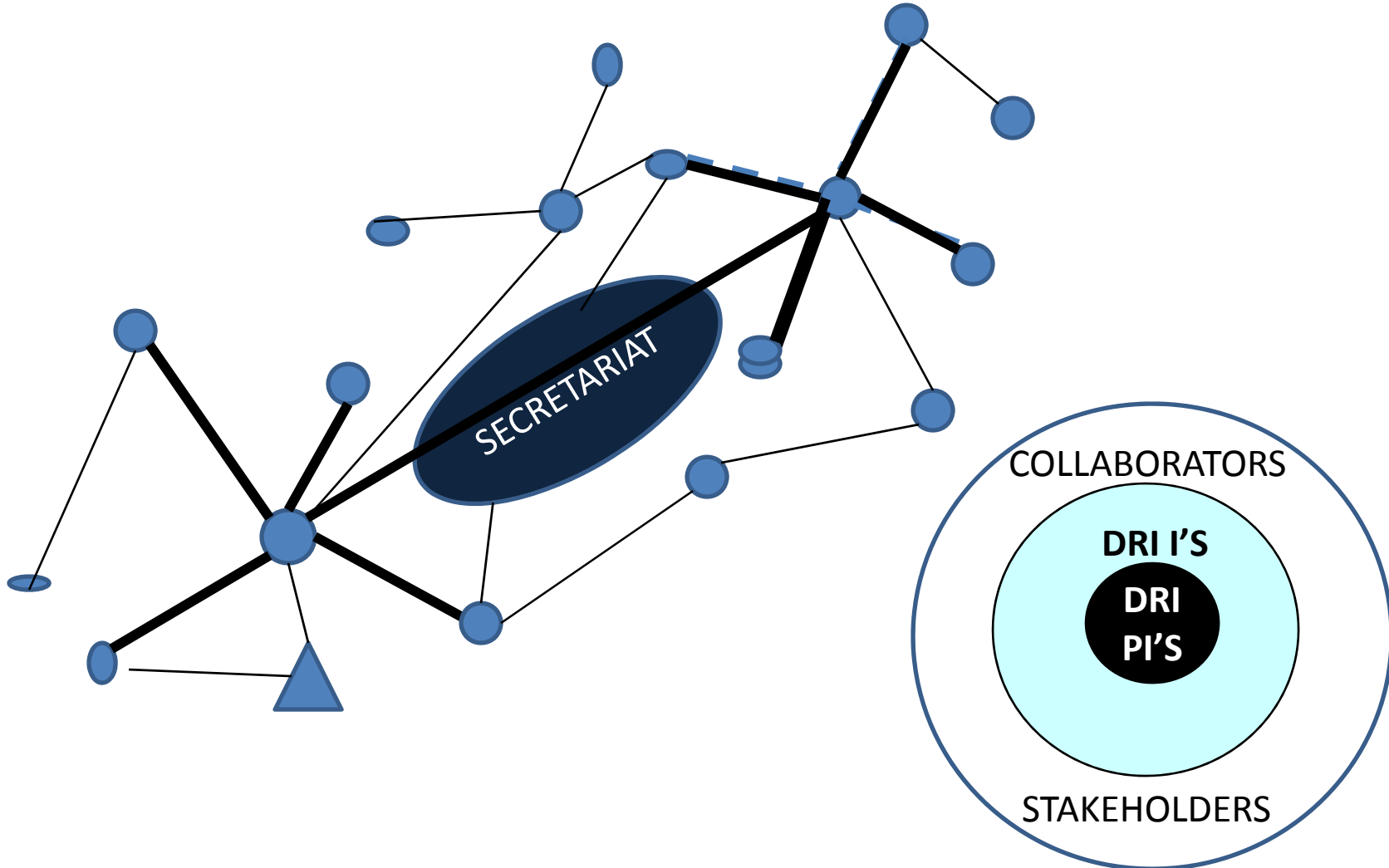


BUILDING THE DRI NETWORK

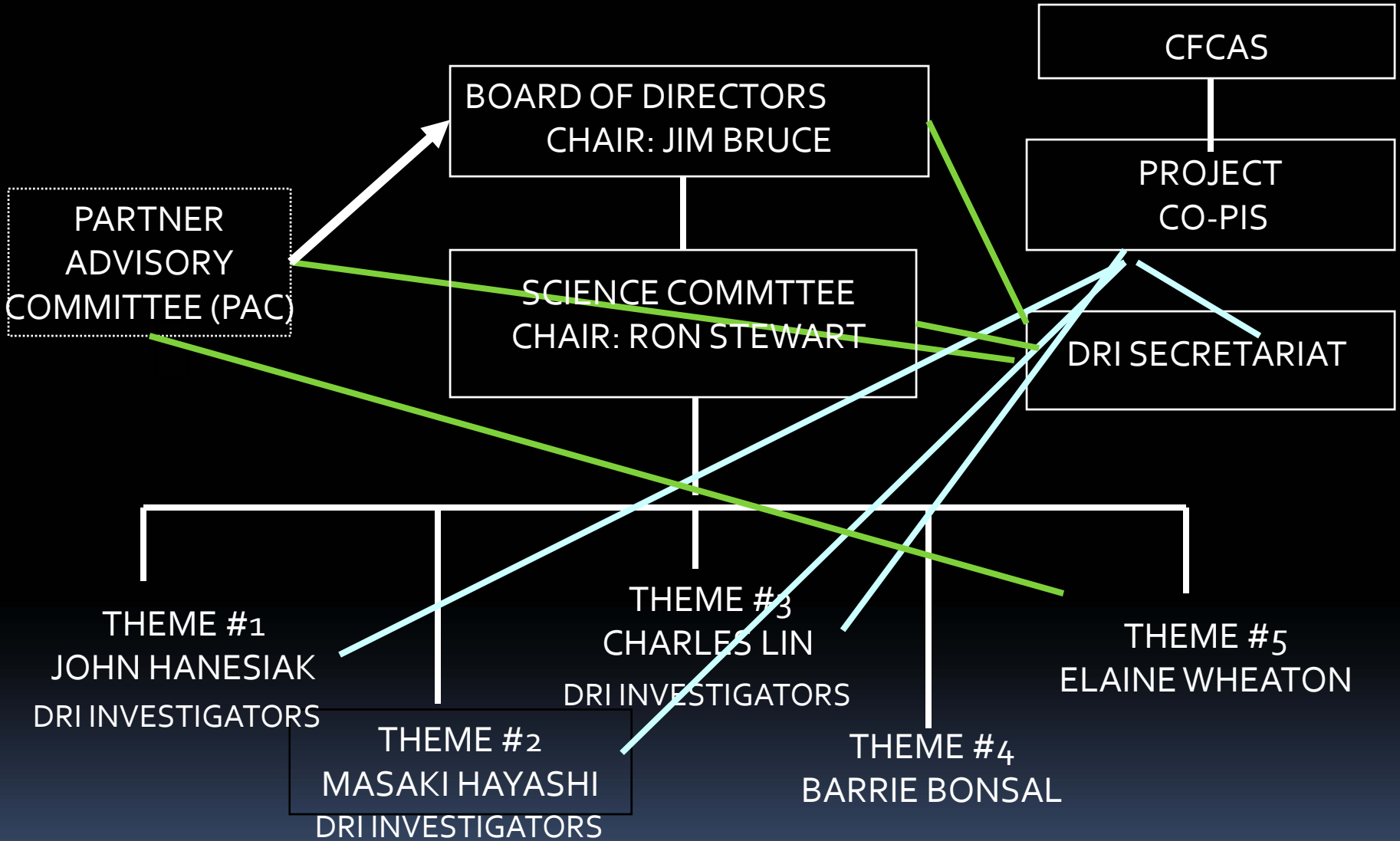
FROM CFCAS



BUILDING THE DRI NETWORK



MANAGEMENT STRUCTURE FOR DRI



THE DRI TEAM

- Co-leads:

John Pomeroy (*Sask*) and Ron Stewart (*McGill*)

- Board of Directors:

- Bruce (Ont), Burke (Alberta), Hill (Sask), Pomeroy (Sask), Stewart (McGill), and CFCAS representatives

- Investigators (15):

Bonsal (*Sask/NHRC*), Bullock (*Man*), Gyakum (*McGill*), Hanesiak (*Man*), Hayashi (*Calg*), Leighton (*McGill*), Lin (*McGill*), Pietroniro (*Sask/NHRC*), Pomeroy (*Sask*), Snelgrove (*Man*), Stewart (*McGill*), Strong (*Alta*), van der Kamp (*Sask/NHRC*), Wheaton (*Sask/SRC*), Woodbury (*Man*)

- Collaborators:

Boer (*MSC*), Berg (*Guelph*), Caya (*Ouranos*), Derksen (*MSC*), Derome (*McGill*), Donaldson (*MSC*), Granger (*NHRC*), Martz (*Sask*), Raddatz (*MSC*), Sauchyn (*Regina*), Shabbar (*MSC*), Skone (*Calgary*), Smith (*MSC*), Szeto (*MSC*), Toth (*EC*), Toyra (*EC*), Walker (*MSC*), Wang (*CCRS*)

- PAC Members:

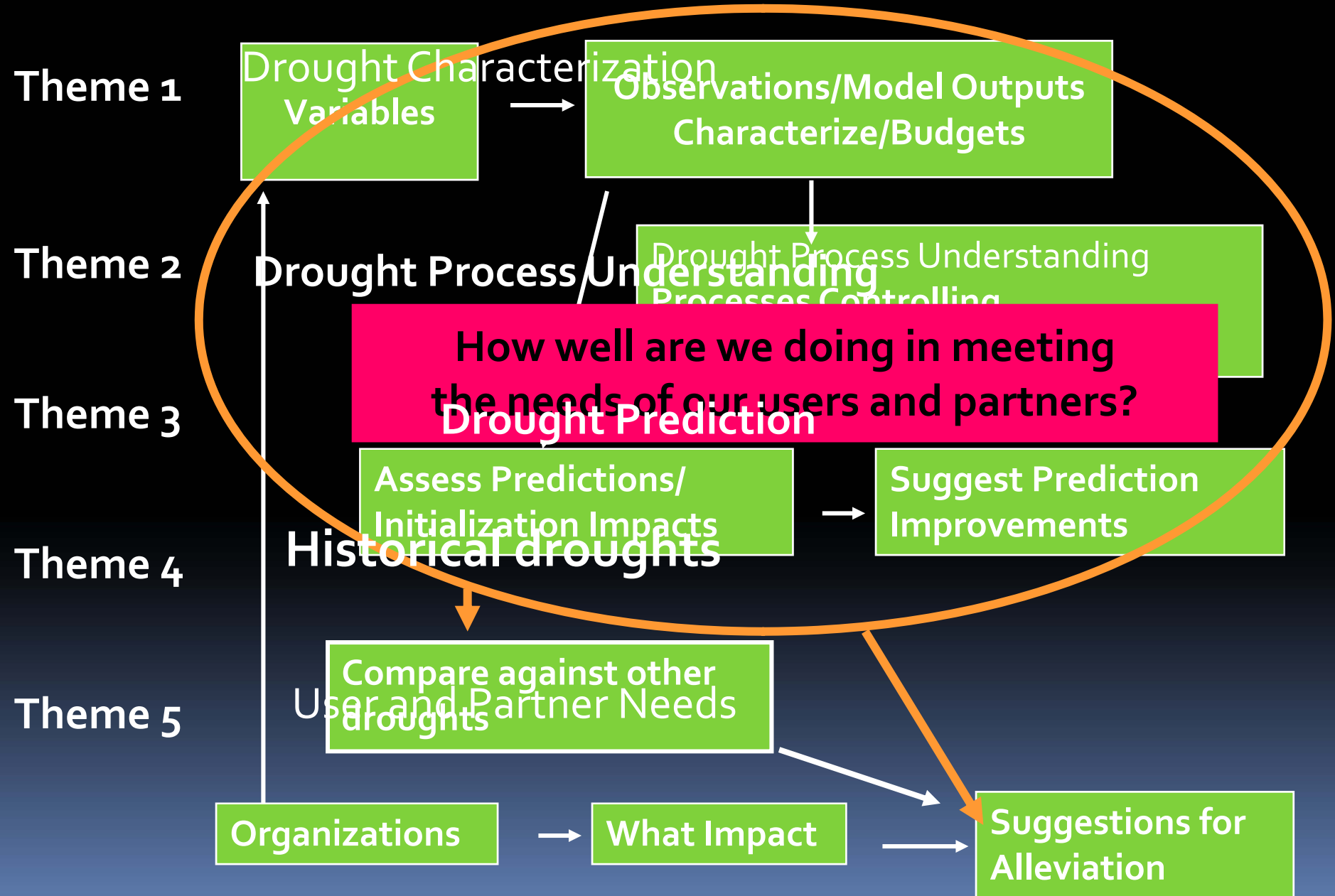
- Cossit (*Sask*), Girling (*Mhydro*), Hanuta (*PFRA*), Hill (*PFRA*), Itenfisu (*Alberta*), Keller* (*Alberta*), Korporal (*CGEO*), Nadler (*Man*), Oegema (*Sask*), Warkentin (*Man*), Wheaton (*Sask*) plus other partners

- Information Management: Patrice Constanza

- Network Manager: Rick Lawford

- Financial Support: Rachael Reynen

DRI DELIVERABLES AND INTEGRATION OF THEMES



IMPORTANT QUESTIONS FROM THE PARTNERS:

1. HOW DO WE KNOW THE 1999-2004 DROUGHT WAS REPRESENTATIVE OF OTHER DROUGHTS THIS CENTURY?
2. "HOW FREQUENT ARE HIGH IMPACT DROUGHTS WHEN YOU USE OUR (E.G. MANITOBA HYDRO) CRITERIA FOR A DROUGHT?"
3. HOW CAN DRI CHARACTERIZE THE GRADIENT OF DROUGHT PROCESSES THAT OCCUR ACROSS THE CANADIAN PRAIRIES?
4. HOW WILL EVAPOTRANSPIRATION CHANGE IN A WARMER CLIMATE AND HOW WILL DROUGHT PROCESSES BE AFFECTED?
5. HOW DO OUR RESPONSES TO DROUGHT AFFECT THE IMPACTS OF SUBSEQUENT DROUGHTS?
6. HOW DO INFORMATION AND TECHNIQUES DEVELOPED FROM THE 1999-2004 DROUGHT BEST SUPPORT DROUGHT MONITORING AND PREDICTION PROGRAMS IN 2008 AND BEYOND?

QUESTIONS THAT GO BEYOND DRI

WHAT SHOULD THE SCIENTIFIC FOCUS AND STRUCTURE OF A FOLLOW ON TO DRI BE?

TO WHAT EXTENT SHOULD WE MOBILIZE THE EXTENSIVE DATA, INFORMATION AND MODELING CAPABILITIES IN THE USA?
WHAT TERMS OF REFERENCE SHOULD BE CONSIDERED IN COLLABORATIVE RESEARCH EFFORTS?

HOW SHOULD DRI CONTRIBUTE TO INTERNATIONAL DROUGHT ACTIVITIES (WCRP, UNESCO, ETC)

SOME INTERNAL QUESTIONS

HOW CAN WE MAKE MORE EFFECTIVE USE OF THE KNOWLEDGE, TECHNIQUES AND DATA BEING PRODUCED THROUGH DRI BOTH WITHIN DRI AND OUTSIDE DRI?

HOW DO WE STRUCTURE OUR DATA HOLDINGS SO THEY ARE MORE USER FRIENDLY AND INTEGRATED?

CAN WE SHARPEN UP THE OBJECTIVES AND MILESTONES AND USE THEM MORE EXPLICITLY IN MAKING DECISIONS ABOUT FUNDING, ETC.?

CAN WE RAISE THE VISIBILITY FROM DRI PROJECTS TO INCREASE THE IMPACT THAT DRI HAS ON POLICY AND TO PREPARE FOR A FOLLOWON PROJECT?

HOW CAN WE BRING PARTNERS INTO THE PROJECT IN A MORE INTEGRAL WAY?

DROUGHT STUDIES WITH POLICY IMPLICATIONS

PAUL BULLOCK: RELATING CLIMATE TO THE PRODUCTIVITY OF DIFFERENT CROPS.

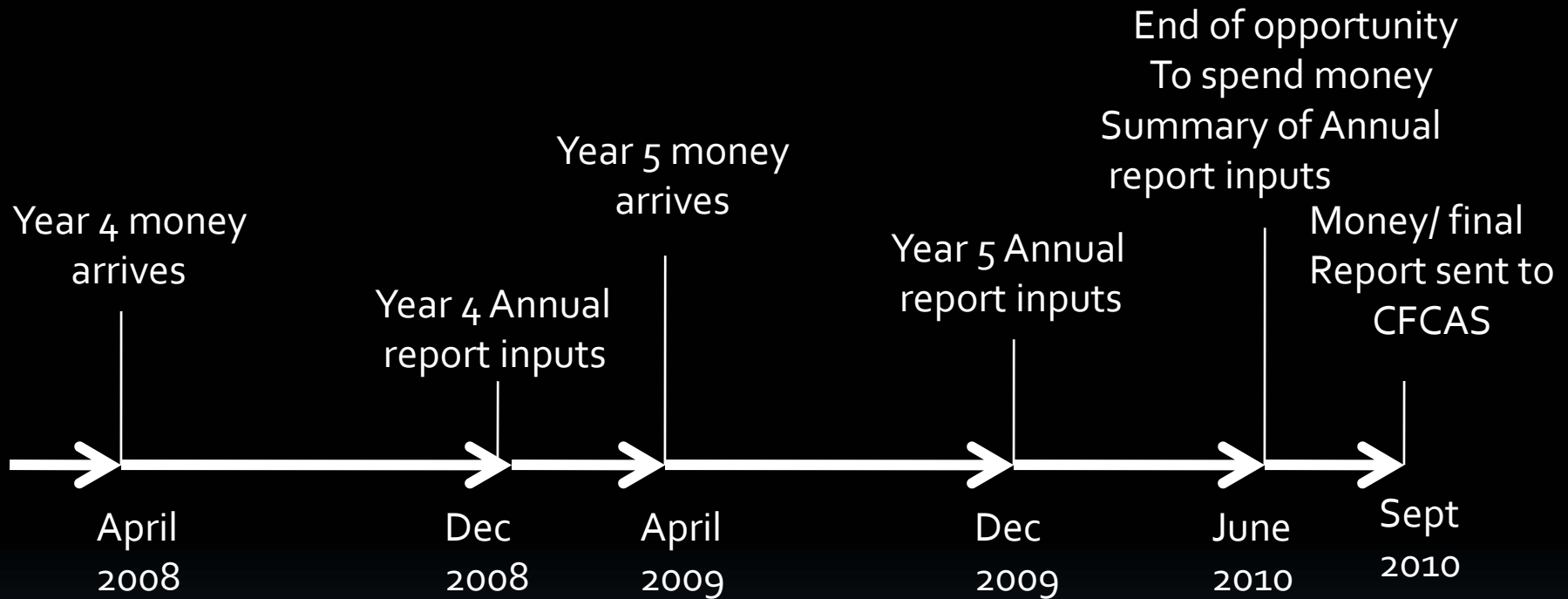
MASAKI HAYASHI, JOHN POMEROY AND AL PIETRONIRO: DOCUMENTING THE PROCESSES DRIVING THE RESPONSE OF SURFACE HYDROLOGY TO DROUGHT.

AL WOODBURY, KEN SNELGROVE AND MASAKI HAYASHI: ASSESSING THE CONSEQUENCES OF DROUGHT FOR GROUNDWATER RESERVES.

BARRIE BONSALE AND ELAINE WHEATON: DOCUMENTING THE PHYSICAL AND ENVIRONMENTAL CONTEXTS FOR THE 1999- 2004 DROUGHT.

HOW CAN WE BUILD ON THESE?

How DRI will unfold over the next three years (An investigator's perspective)



Bottom line: If we don't have a project in place with funds flowing by the spring of 2010 there will be a serious reduction in drought research at that time.

THE DRI WEBSITE

The DRI Website is a resource for DRI Investigators, Collaborators and Stakeholders. It is also the face of DRI for the world.

During the past year we have:

- Updated the data sets and the data links on the webs site.
- Provided most the information regarding the workshop (Some changes for next year).
- Developed an Extremes web page and a simple technique for updating through Googledocs.

During the coming year we plan to:

- Launch the CGEO web page on soil moisture.
- Launch a discussion page.
- Organize the data links into a more user-friendly format.
- Explore ways of linking to analysis and visualization techniques through the web interface (moving to Web 2.0).

Some DRI Data Issues

1. Large data sources are consolidated at the Ouranos and McGill facilities. However small data sets are not consolidated in one place.
2. DRI does not have clear metadata standards. The quality of metadata on the DRI website is highly variable.
3. The philosophy for data processing could be developed. While the technology exists to do all the analysis on a large machine (Ouranos) it is not clear that the systems are being developed in this direction (at least not in time for DRI investigators to benefit before the end of DRI).
4. Data integration could play an important coordination function in DRI although the role and purpose of data integration need to be clarified. If it is solely visualization, Google Earth may be a suitable integrator. If it is for analysis purposes, then a data assimilation system may be the best solution (if we have enough resources to do it).
5. There are a number of data sets on the DRI web site and many data links but these need to be better documented and organized.
6. A central problem in addressing these issues is the lack of an information manager.

The top three reasons why investigators should respond to requests for information inputs in a timely way (A Network Manager's Perspective).

1. Positive impressions:

Investigators who get things done in a timely way build confidence that they can take on greater roles.

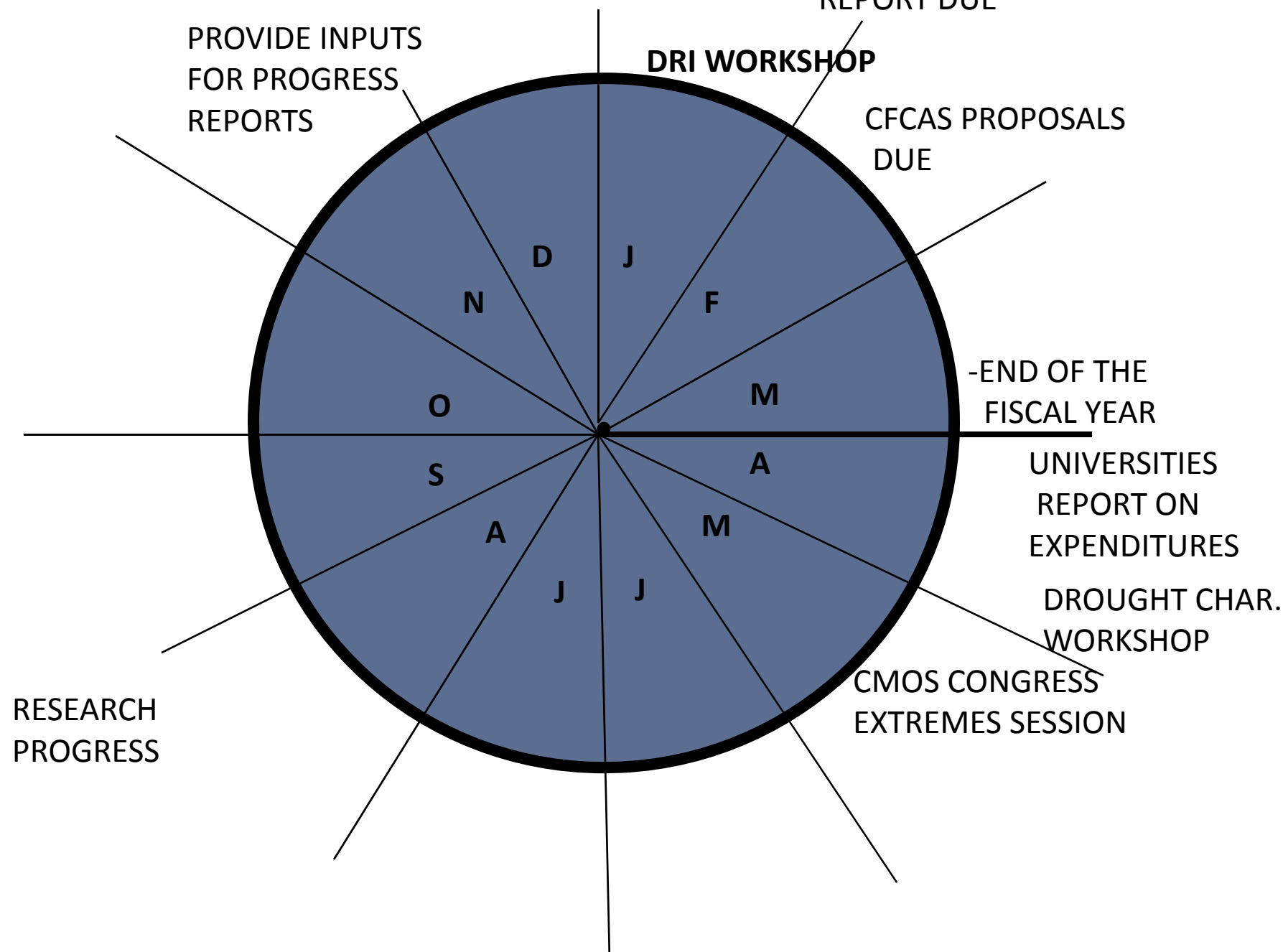
2. Enlightened self-interest:

Messages sent out looking for inputs are often important for DRI to meet the requirements of CFCAS and our stakeholders. Timely collective inputs are to DRI;s advantage (and hence to the advantage of all investigators).

3. Social responsibility:

Late responses generate more emails for everyone. Timely responses keep everyone's mailboxes emptier not to mention the consequences of late reports and responses for the network .

2008 DRI CALENDAR



THIS WORKSHOP

First Day and a half: Reports from different investigators, collaborators, and partners on progress during the past year.

Friday afternoon: Assessment of where we are and what we need to do between now and 2010 (when DRI money runs out).

Saturday morning: Assess what we can reasonably leave as a legacy and where we need to move drought research in the future.

Criteria for success:

1. Some substantive follow-up actions
2. Volunteers to take on proposal development and other implementation tasks.
3. New collaborations and activities that make more use of the DRI network.

LOGISTICS

1. Washrooms are located at either end of the Ballroom.
2. Internet connections are available. We have wireless connections for ~45 people. The codes for accessing the internet are:
88550a2d 19802198 250df717
3. Posters should be put up in the South Ballroom at the morning coffee break on January 17 and taken down at the afternoon coffee break on the 18th.
4. Please load your presentations on the computer as soon as possible but definitely by the break before the session when your talk will be given. (Also include your name in the file title)