

Research Network Management:

The Green Crop Network experience

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Why do we need research networks?

To integrate various research in order to:

- Achieve a common research goal
- Share experiences & professional expertise
- Strengthen interactions among experts in different research areas
- Avoid research area overlap
- Use research funds effectively & efficiently

Case Study: Green Crop Network (GCN)

- National Research network funded by NSERC, other governmental agencies and 2 industrial partners (total \$1.2 millions/year for 5 years)
- Includes 14 Universities, 50 researchers, and 45 graduate students and postdoctoral fellows (PDFs)
- Uses an integrative approach to minimize greenhouse gas (GHG) emissions by agricultural means

Research themes in Green Crop Network

- **Theme 1:** reduce N_2O emission through reduced nitrogen requirements and altered root physiology
- **Theme 2:** aid in enhancing soil carbon stocks
- **Theme 3:** optimize yields and performance under conditions of increasing CO_2
- **Theme 4:** increase production of plant oils suitable for biofuel production

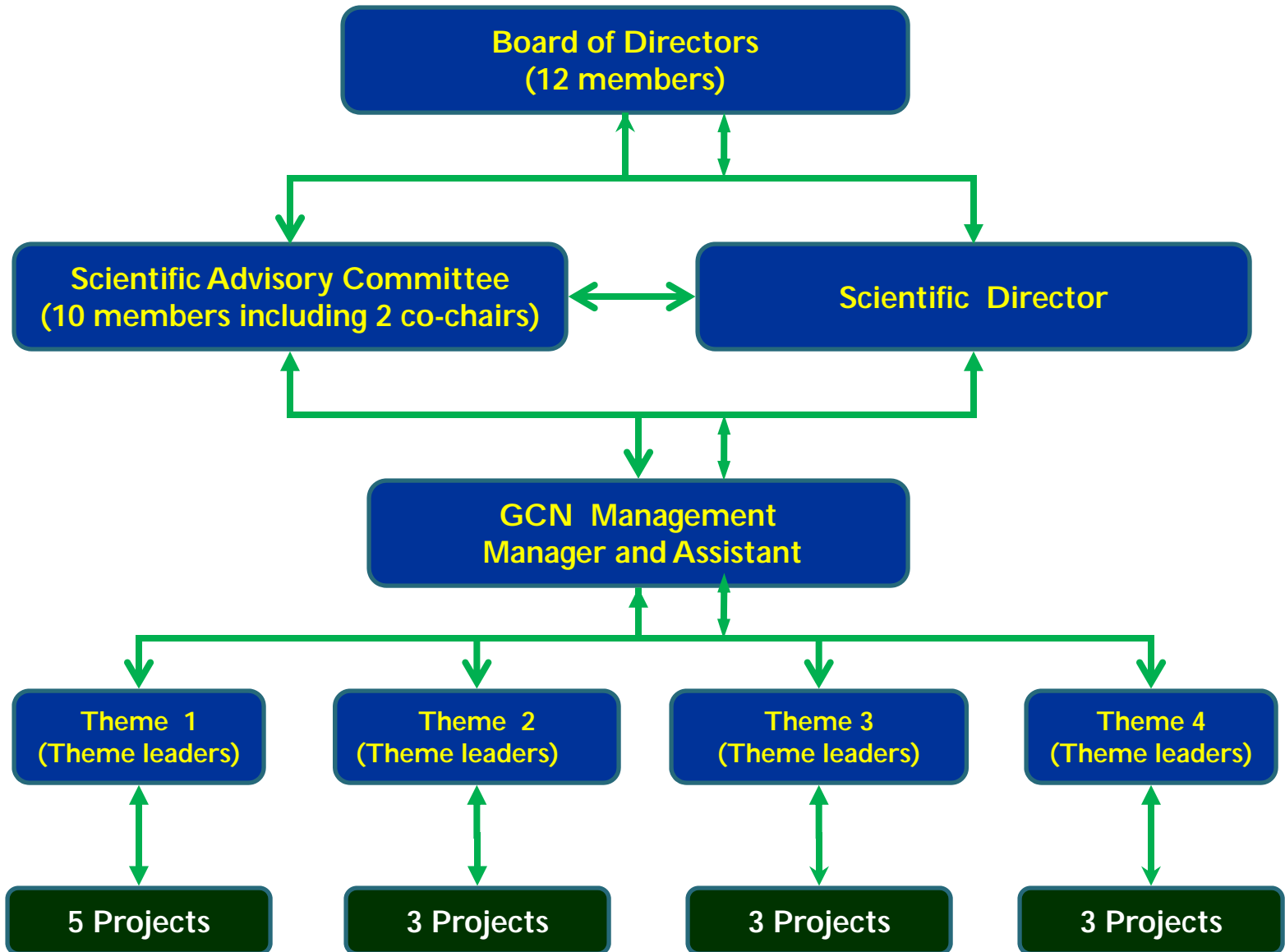


Green Crop Network Research Groups Across Canada



www.greencropnetwork.com

GCN Management Structure

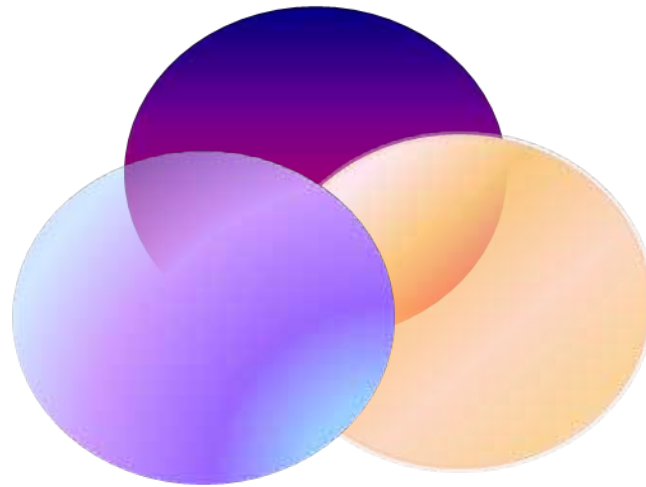


Network Manager Role

- Manage administrative, research & financial affairs:
 - Coordinate activities of all involved partners
 - Ensure and monitor network operation & progress
 - Manage the network's financial affairs
 - Establish regular communication among partners
 - Organize regular & strategic meetings and events

Three Components of Research Network Management

Administrative management



Research management

Financial management

Administrative Management

Goals

- Achieve coordinated effort among all involved parties
- Provide an effective support system



Administrative Management (contd.)

Approaches to achieve administrative management goals:

- Learn from other networks experiences
- Plan & assess network activities (research & outreach) according to funding agency requirements & needs
- Be effective, efficient & strategic in network activities

Research Management

Goals

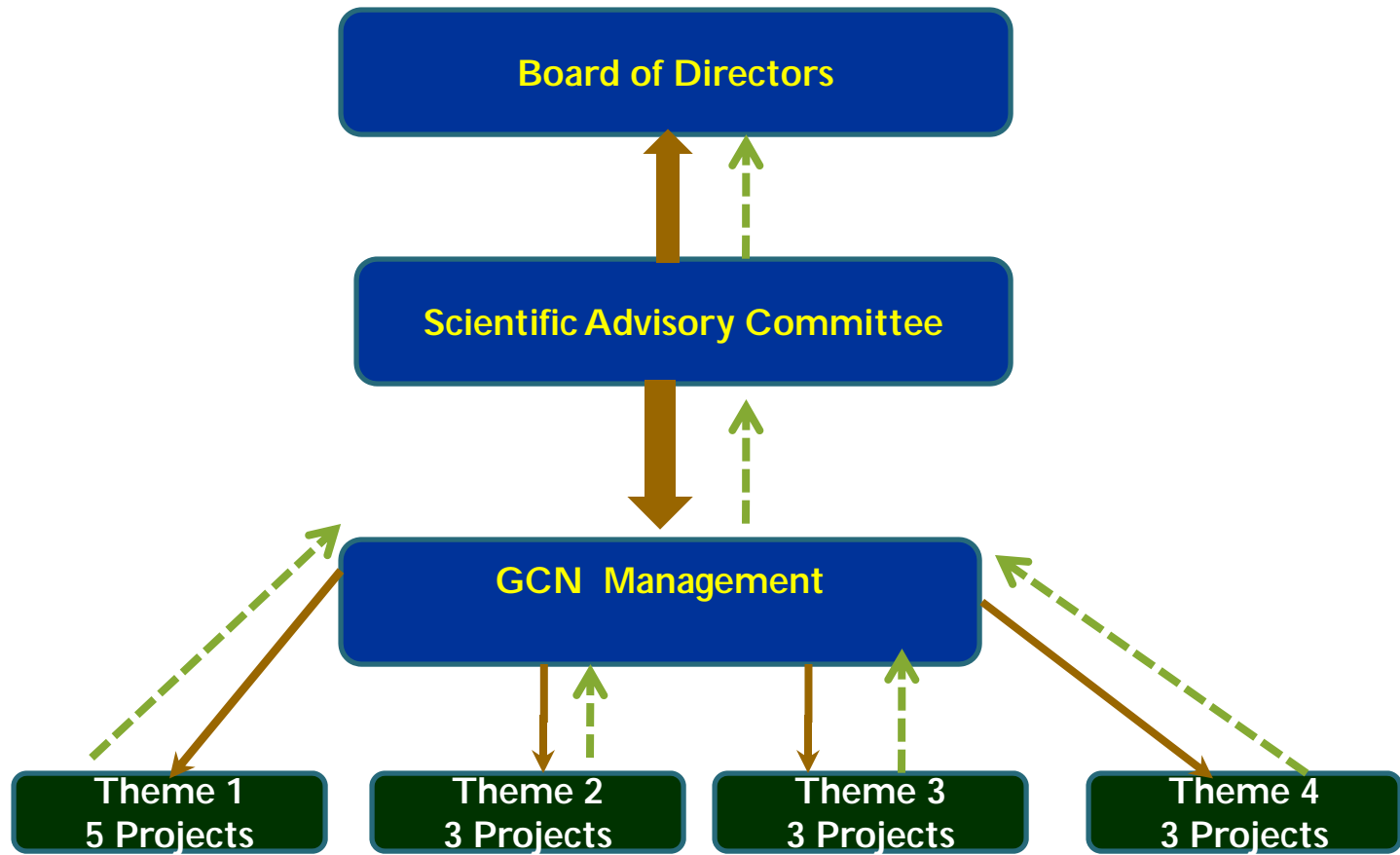
- Ensure research progress goes towards achieving network objectives & goals
- Promote interactions between researchers & projects

Research Management (contd.)

Approaches to achieve research management goals:

- Create an effective reporting process for research progress evaluation procedure
- Establish a strong working partnership among all involved parties
- Provide interaction opportunities

GCN Research Evaluation process



Research Management (contd.)

Create an effective reporting process to monitor that research progress meet proposed objectives:

- **Frame reporting according to the milestones and responsibilities set up in the proposal**
 - ✓ Simple Standardized templates decrease workload

- **Different reporting formats are needed**
 - ✓ Written & oral
 - ✓ Provide transparency
 - ✓ Increase comprehension
 - ✓ Take advantage of individuals' strength

Research management (contd.)

Establish a strong working partnership among research groups

- Ensure regular meeting of decision making bodies and research groups
 - ✓ *e.g.*, Scientific Committee & Board, Project groups
- Be strategic in your meeting planning
 - ✓ *e.g.*, project meeting should be scheduled before theme meetings

Research Management (contd.)

Interaction opportunities for GCN members



Financial Management

Goals

- Monitor fund expenditures according to the requirements and regulations of the funding agencies
- Ensure proper distribution of funds
- Submit accurate financial reports

Financial Management (contd.)

- Budgeting
- Fund distribution
- Financial reporting



Financial Management

Budgeting

Years ahead (5 years):

- How much \$ is thought to be needed for each time period
- How much \$ is expected to be received

	Budget in Year 1	Budget in Year 2	Budget in Year 3	Budget in Year 4	Budget in Year 5
Projection	\$100,000	\$140,000	\$140,000	\$120,000	\$100,000
Fund received	\$100,000	\$140,000	\$140,000	\$120,000	\$100,000



Financial Management

Budgeting

Our 1st year:

- For reporting period (e.g., Monthly, quarterly or yearly).

	Project Budget (A)	Expenditures (B)	Difference (A-B)	% of budget (A-B)/A	Justification
Project 1	\$100,000	80,000	\$20,000 (under budget)	-20%	Late student placement
Project 2	\$100,000	120,000	\$20,000 (over budget)	+20%	Unexpected field costs.



Financial Management

Budgeting

- **Lessons to remember**

- Use realistic numbers
- Track expenditures & compare to budget-
planning isn't effective without effective
record keeping
- Model a variety of situations – be
conservative and have backup plan(s)



Financial Management

Fund distribution

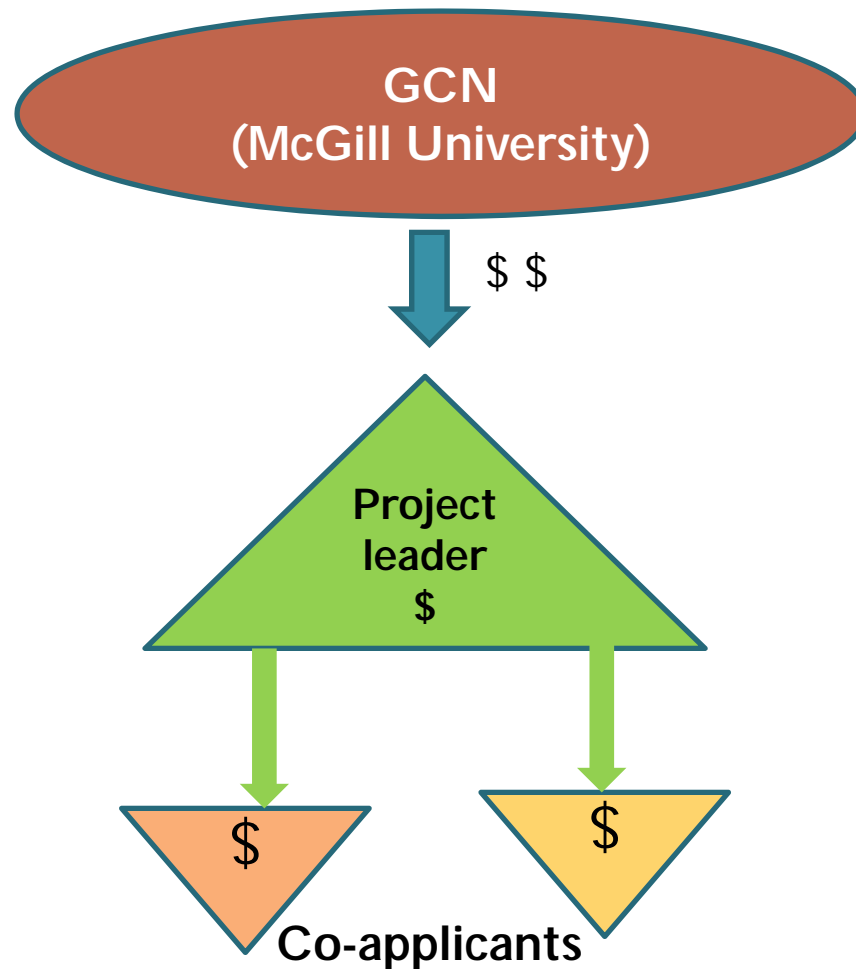
- **Challenges:**

- All partners (Universities) need to agree to follow the same procedures *i.e.*, sign agreements
- Utilize time & resources efficiently
- Make sure all partners financial regulations are respected



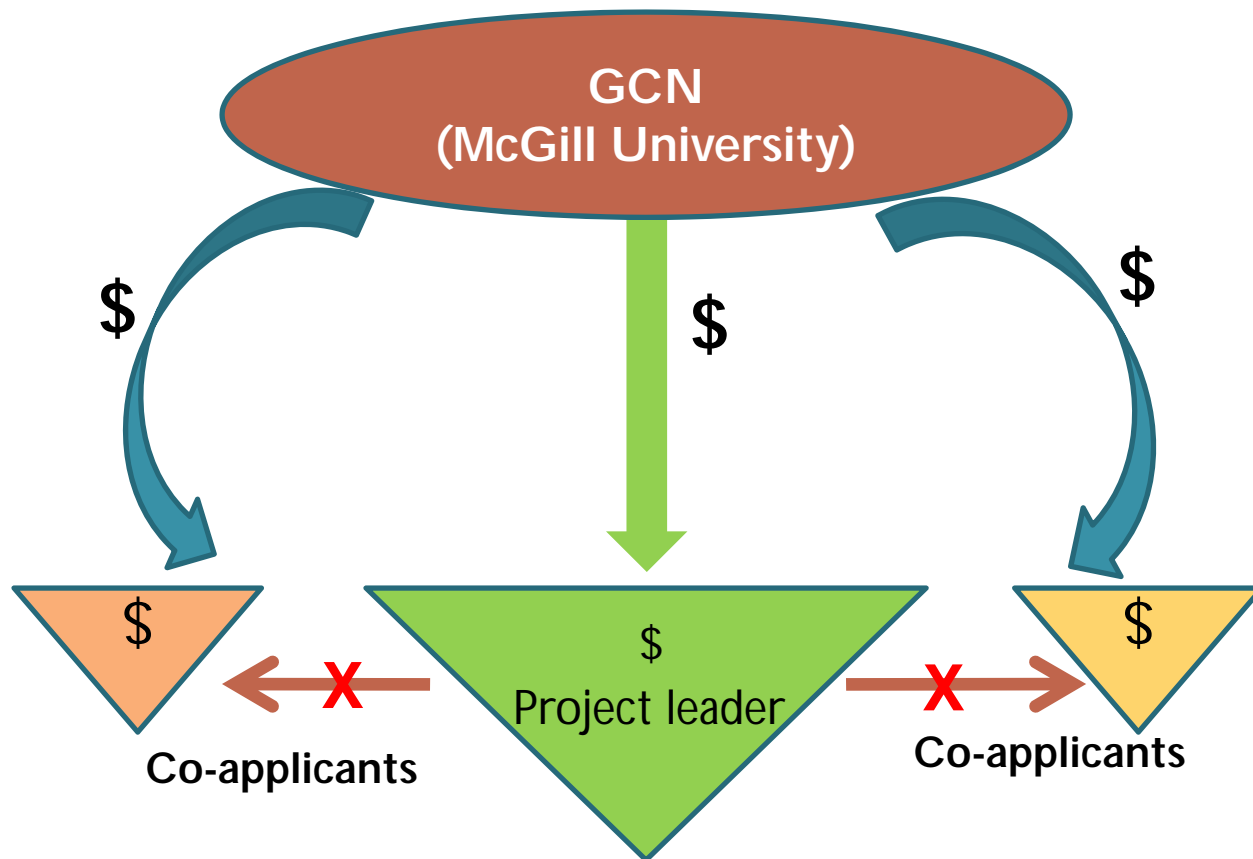
Case study

Fund distribution structure



Case study

Fund distribution **restructure**



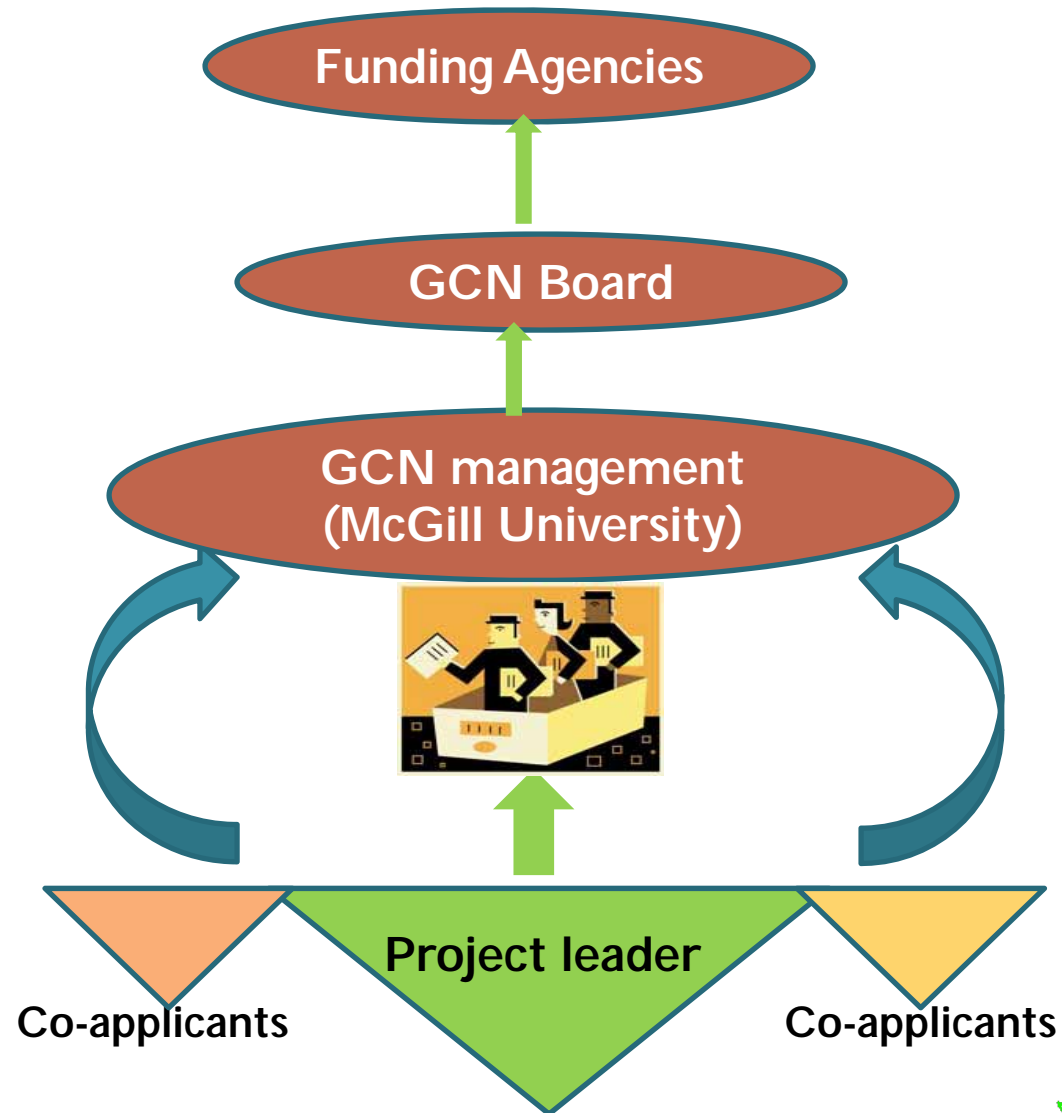
Financial Management

Financial Reporting

- Financial reporting provides accountability and an overview of a network financial condition both short and long term
- Cover certain period (*e.g.*, annual, 6 months, 3 months etc.)
- Basic financial statement includes:
 - Income
 - Expenditures
 - Balance of funds (surplus/deficit)



Financial Reporting Procedure



Summary: Research Network Management

- Effective management should be:
 - well planned
 - closely monitored
 - an efficient use of resources
- Proper approaches to achieve management goals should be flexible, focused on your goals and integrated
- Strong working partnership within the network is a key factor to make the network meaningful

Take Home Message

Ensure that your network management plan is feasible, attainable and objective-oriented

Ask for help when needed!

Acknowledgments



GCN Board of Directors



GCN Scientific Advisory Committee



**NSERC
CRSNG**



**Environment
Canada**



**Natural Resources
Canada**



McGill



Dr. Donald Smith
Scientific Director



Magali Merx-Jacques
Research assistant



Questions ?