

Breakout Session #1 - A Shared
Vision of Future Logistics
Monday a.m., 7 October 2013

Group 6

Range of background and experience

- Terrestrial & marine
- Arctic & antarctic
- Remote sensing & field obs
- Science & logistics
- **Absence of social science representation**

What does field research look like (in the next 20 years)?

More autonomous than today

Data received / disseminated in real time

Satellite data playing larger role in research and planning

What logistics support is in place?

Foreign ice breakers

Smaller boats for short-term / mobile research

New roads?

How is the support delivered?

- Greater use of foreign ice breakers
- Smaller boats for short-term / mobile research
- Communications will take on a greater importance
- Increased use of autonomous platforms will change logistics needs
- Greater number of ships / aircraft / sleds-of-opportunity

How would it be same or different from today?

Key transformative technologies in last 20 years

- GPS, satellite communications/telemetry
- Improved satellite data availability/accessibility
- This has largely made things much safer

Next transformative technology

- Autonomous platforms
- Lighter-than-air vessels (dirigibles / blimps)

How would it be same or different from today?

Much current tech & infrastructure > 20 yrs old

- Icebreakers
- LC-130s
- Roads
- Buildings
- **Much of this will need to be replaced soon**

How would it be same or different from today?

Many logistical challenges will remain same

- e.g. traversing ice sheet margins will always require airlift

Some new challenges will emerge

- Researcher expectations currently outstripping improvements in communications
- Competition for limited infrastructure with increased commercial activity

How would we foster interdisciplinary science and system-level understanding?

International collaboration will play a key role

- Use of foreign ice breakers
- Access to Russian Arctic

Facilitated at high- and low levels

- Heads of agencies
- Arctic council
- Grass roots collaborations (scientific & logistical)

How would we foster interdisciplinary science and system-level understanding?

Sharing of technologies across disciplines

- E.g. including optical / bio sensors on more buoys & moorings
- Co-development of communications and remote power systems