

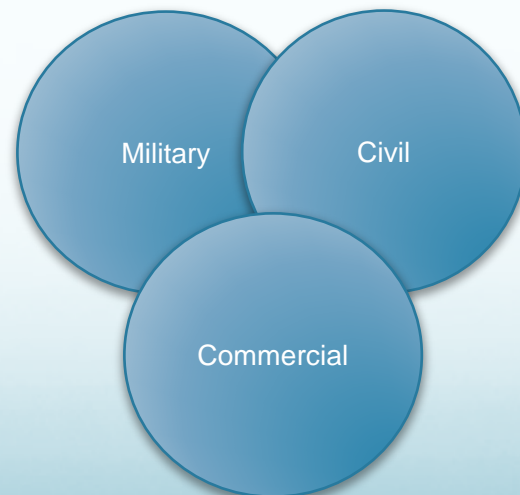
Space Debris Remediation

Organizational and Operational Requirements
Karl Doetsch, DISC

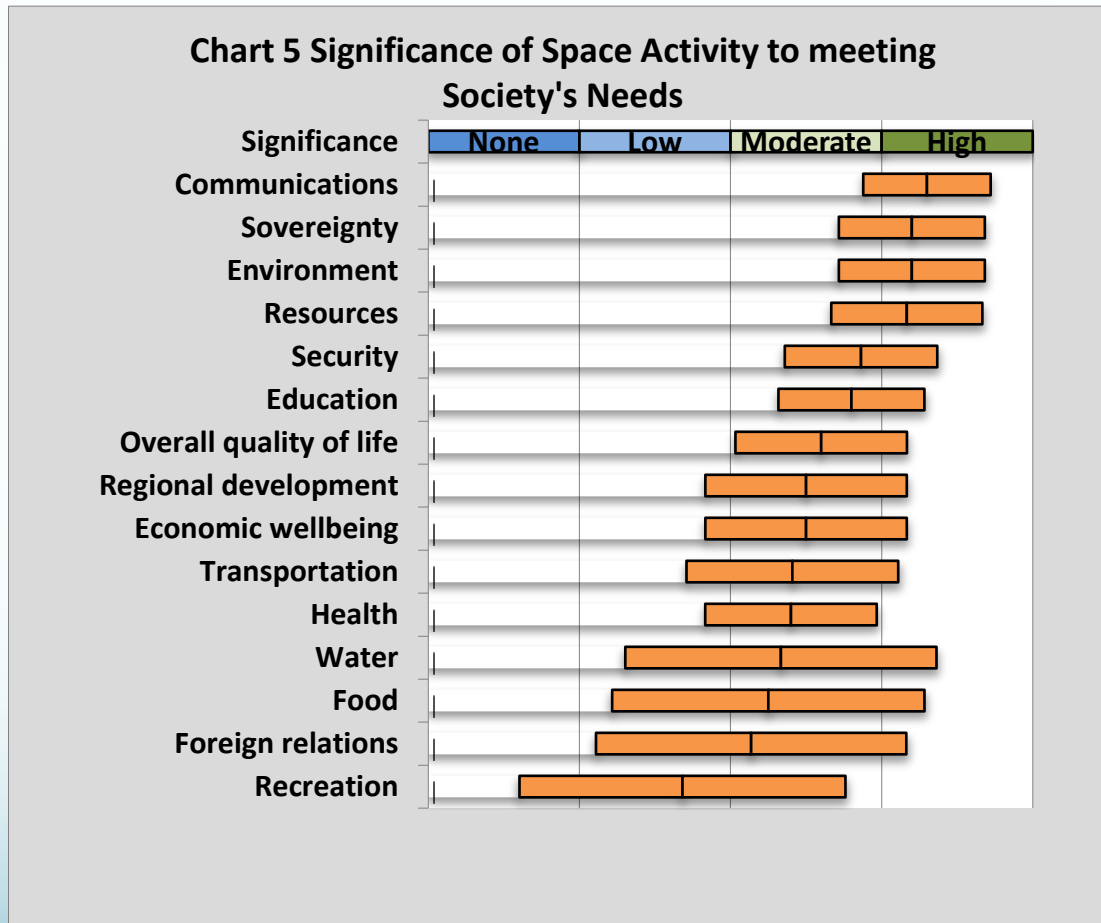
2nd International Interdisciplinary Congress on Space Debris Remediation
McGill University, November 11-12, 2011

Who are the principal Space Players?

- Space activity involves Civil, Military and Commercial interests at national, regional and international levels.
- Self interests can be mutually supportive, competing or conflicting between various players.

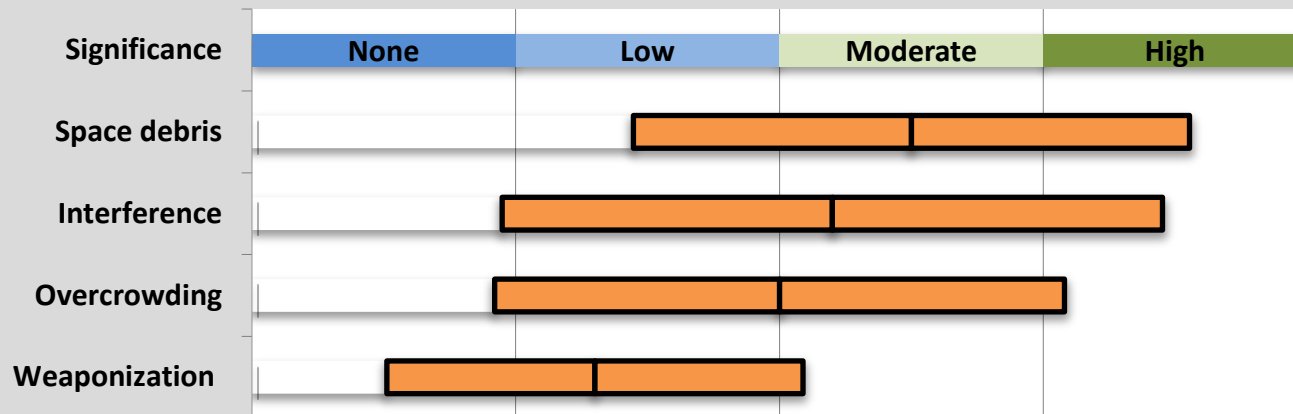


Space activity meets needs of civil, military and commercial users



What are the greatest perceived threats to long-term space activities?

Chart 4 Significance of Various Space Environment Threats to Polled Organizations' Future Space Activities

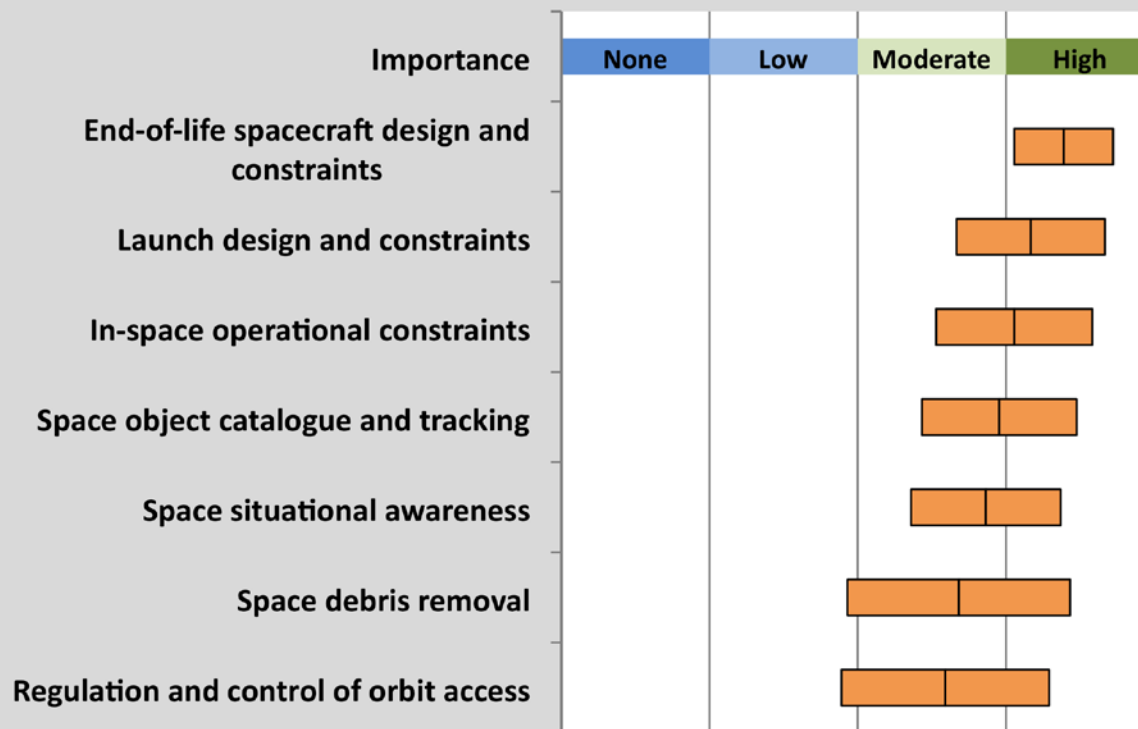


Who should undertake space debris remediation?

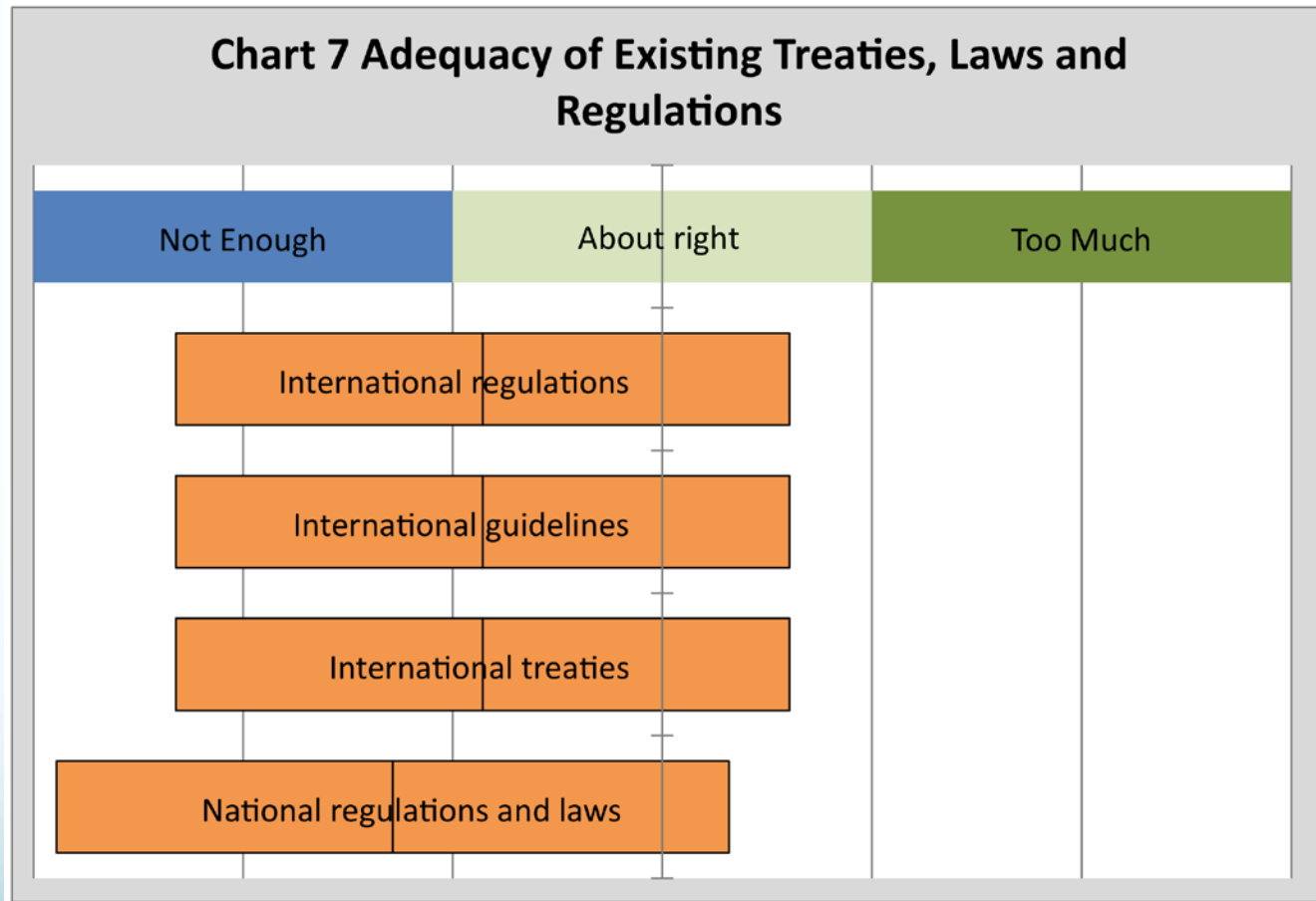
- Who?
 - Principal space system procurers, developers and operators
- How?
 - Public-private partnerships with activities monitored and coordinated at national and international levels

What is needed to reduce the risk of mishaps, misperceptions and mistrust?

Chart 6 Importance of Various Remedial Actions to Protect Long-term Space Activity



There is currently no collective Canadian perception of a major mismatch between sustainability needs and existing space treaties, laws and guidelines



Next Steps

- Support UN COPUOS and national efforts on long-term sustainability of space activity
- Establish, report, collect and implement national and international best practices
- Establish need for, and technical and economic feasibility of space debris removal
- Once feasibility of various technical approaches is confirmed for achieving or improving the long-term sustainability of space activity, establish whether national or international guidelines, regulations and treaties need to be strengthened for implementation.

References

- The bar charts of Charts 3, 4, 6 and 7 are reproduced from consultations with Canadian government, industry and academia, completed in 2011 by DISC for the Canadian Space Agency. CSA's support for this activity is gratefully acknowledged.