Strategies for Enabling Lunar Exploration: A NextGen Perspective

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Next Generation Lunar Scientists and Engineers (NGLSE or NextGen)

(n.) Assemblage of graduate students, post-docs, and early career scientists who have a passion and vision for lunar science and exploration and who are the future lunar workforce for NASA, academia, and industry.
Purpose of NextGen

- Provide guidance and networking opportunities to early career lunar students and professionals
- Foster collaboration with other groups within the lunar community.
- Keep the Moon at the forefront of discussion for future Solar System exploration
Why Should NextGen Have a Role in Enabling Lunar Exploration?

• We are the future lunar science workforce
• New perspectives; new innovative solutions
• Experience with the integration of science and engineering
• Active in advocacy efforts
• Need preparation in training and leading the next generation
• Passion, drive, and vision
1. Defining Exploration Priorities
2. Integrating Science and Engineering
3. Field Training and Analog Studies
4. (Financial) Support for Exploration Science Research
5. Commercial Partnerships
Why?

• NextGen provides fresh perspectives on:
  – destinations
  – scientific objectives
  – exploration strategies

How can NextGen be involved?

• Include NextGen on SSERVI teams and strategic action teams
Why?

Scientists and engineers must be brought together in a way that optimizes the planning and implementation of future missions. JPL’s Team X and APL’s Ace Runs exemplify this synergy.

How can NextGen be involved?

• Provided opportunities for cross-training
  – with programs like JPL’s Planetary Science Summer Seminar
Why?
Developing techniques and tools for planetary field geology is vital to human exploration. Several capability gaps still exist, and NextGen members are already active in filling these gaps.

How can NextGen be involved?
• Continued involvement in astronaut field geology and spacesuit testing.
• NextGen involvement will preserve and extend institutional knowledge beyond the current knowledge base.
Why?
Few grant programs exist to provide support solely for exploration science-focused research.

How can NextGen be involved?

- Funding for exploration science investigations would provide opportunities for early career (and senior researchers) who are not active mission team members to carry out exploration research studies.
- Targeted exploration funding for early career researchers would ensure NextGen have the resources necessary to contribute fresh perspectives and innovative methods to exploration science questions.
Commercial Partnerships

Why?
Partnering with commercial companies promotes science/engineering integration, which enables continued lunar surface exploration at lower costs and with higher scientific return.

How can NextGen be involved?
• Continue to build relationships with private industries
  – build on our relationship with Moon Express
  – Lunar8 members are part of NextGen
The NextGen group wants a clear and active role in enabling future lunar exploration.
NextGen/LEAG Dinner

Tonight!
6:30 PM

Houlihan’s
8240 Gateway Overlook
Elkridge, MD 21075

All are welcome!