

JUSTSAP 2010

Bringing Benefits of Space Settlements Down to Earth

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Christopher Pestak
pestak@battelle.org

What is the Battelle Memorial Institute?

- Non-profit, charitable trust
- One of the world's largest independent, non-profit R&D corporations
- Started operations in 1929
- Global enterprise
 - Applying science and technology to real-world problems
 - Managing machinery of scientific discovery and innovation
 - Creating commercial value by bringing new technologies to international marketplace



- Generates >\$5B annually in global R&D
- Oversees over 20,000 employees in 130 locations worldwide



Large Company & Vision



Large Network of People and Technology



Large Opportunity to Make More Impact



Why Create a Lunar R&D Park ?

Q: Why are these people willing to endure unbelievable hardship, risk their life savings and, in many cases, risk their lives? What is it they are pursuing?



Westward expansion



Klondike Gold Rush

a) Opportunity

b) Adventure

c) Fortune

d) A New Life

e) a-d

These were not government led enterprises. However, the foundation for these events was established by government sponsored research (Lewis & Clark Corps of Discovery) and public/private partnerships (railroads).

Battelle Focuses on Terrestrial Applications of Space Technology

Application of Space-Based Remote Sensing to Major Societal Issues

- Agriculture and Fisheries Management
- Air Quality Monitoring
- Water Resources Management
- Climate Change Monitoring
- Community Infrastructure Planning
- Greenhouse Gas Monitoring
- Disease Vector Tracking/Modeling
- Environmental Clean Up
- Improving Energy Efficiency
- Disaster Response

Enabling Space Exploration

- Human and Robotic Lunar Exploration
- In Situ Resource Utilization on Moon and Mars
- Lunar Energy Architectures
- Advanced Closed Loop Life Support
- Lunar Resource Prospecting/Exploitation
- High Bandwidth Communications

Future Energy Solutions

- Space-Based Solar Power Systems
- Terrestrial Applications of Space Technology

Cross cutting technologies that benefit both space and Earth applications support sustainable space exploration

Synergistic Business Operations Enable Sustainability for LRDP/U

LRDP/U Operations

Serve national/international interests and provide a primary source of S&T and IP for other potential industrial clients and venture partners

Govt. & Industrial Clients

Integrate the S&T and IP into innovative solutions to significant problems of clients for a fee, generating cash flow to support renewal

Investors & Venture Partners

Provide contemporary commercial marketplace knowledge and investment to deliver significant financial returns for renewal and contribution to the economies of the participating nations



***Assuring
Sustainability
of LRDP/U***