



Learn. Reach. Achieve.

ONLINE CONFERENCE

NewSpace Industrialization

**January 12-13, 2021
Online | Pacific Time**



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Overview

In the summer of 2020 the US Space Force, Air Force Research Laboratory, and Defense Innovation Unit published a report on the importance of establishing an industrial base to sustain US economic and military leadership in space. Shortly after, Deloitte announced a memorandum of understanding to develop a master plan that identifies the required infrastructure, human capital development, governance and financing necessary to support the United States Space Force mission and position California as a global leader in the future of the commercial space industry. The next space industrial base is headed to southern California.

While innovative technologies, commercial applications, and new business models drive the commercial space economy, return on investment is by and large realized by well-established aerospace primes and select NewSpace companies. For NewSpace startups to experience the same ROI the industry itself must continue to develop. For new players to succeed and grow from startup to maturity there must be a better marketplace, increased demand, and greater economies of scale. This online event will bring together Vandenberg Spaceport developers and other leaders in NewSpace for an in-depth executive discussion on how to establish a sound NewSpace industrial base.

Learning Objectives

This conference will provide attendees an opportunity to:

- Evaluate locational strategies for establishing an industrial base
- Review the importance of US-based manufacturing
- Improve supply chain efficiency
- Examine the benefits of standardization & commoditization
- Rethink the marketplace for improved B2B interaction and transactions
- Evaluate opportunities for vertical integration and M&A activity
- Meet & collaborate with NewSpace executives in an interactive format
- Explore new partnership opportunities with leaders in Moon and Mars programs

Who Should Attend

- Federal agencies & regulatory authorities
- NewSpace startups
- Aerospace primes
- Launch service providers
- Satellite manufacturers
- Procurement managers
- Parts & component suppliers
- Mission directorates, project managers
- Business development & sales executives
- Chief technology officers, engineers

Agenda

TUESDAY, JANUARY 12, 2021 - PACIFIC TIME

7:45 – 8:00 am

Log In

How to Establish an Industrial Base

8:00 – 8:45 am

Keynote Address: Strategies for Establishing an Industrial Base

- Vandenberg Air Force Base—Visions of a Thriving Spaceport
- Location strategy and site evaluation
- Maximizing the potential for job growth and stimulating local economies
- Governance and financial aid
- Proposed timelines

Jeff Matthews, Specialist Leader, Government & Public Sector Space Industry Practice, Deloitte

8:45 – 10:15 am

Industrial Base VS Regional Clusters

- Centralization VS clusters
- Ports and landing sites VS manufacturing sites
- Center of Excellence VS economic base (Silicon Valley)
- Academic and workforce hubs
- The role or strategy behind aerospace hubs

Moderator: Jeff Matthews, Specialist Leader, Government & Public Sector Space Industry Practice, Deloitte

Gavin Brown, Executive Director, Michigan Aerospace Manufacturers Association (MAMA)

James Causey, Executive Director, Global Spaceport Alliance

Andrew Hackleman, Vice President, REACH

10:15 – 11:00 am

The Constellation Effect—Frequency Standardization & Hardware Commoditization for Greater Industrialization

- Industrialization and its dependence on constellations for economies of scale
- Frequency standardization initiatives
- Hardware commoditization trends
- How to break down innovation silos while maintaining competition and innovation
- Collaboration to create synergies and cohesiveness within the supply chain
- Accelerating production to minimize launch delays
- Will standardization and commoditization result in a mass market?

Gabe Dominocielo, Co-Founder, Chief Strategy Officer, Umbra Lab

Alexandre Vallet, Chief, Space Services Department, Radiocommunication Bureau, International Telecommunication Union (ITU)

11:00 am – 12:00 pm

Is the NewSpace Industry Ready for a Broader Industrial Base?

- The importance of US-based manufacturing
- Establishing a better marketplace for B2B transactions
- Impacts on the ecosystem and economies of scale
- Evaluating all opportunities within an industrial base
- Vertical integration and M&A opportunities for aerospace primes
- Exit strategies for NewSpace startups
- Implications of security issues in relation to industrialization
- Impacts to quality control and integration
- Drivers for and hurdles against an industrial base

Moderator: Debra Werner, Correspondent, SpaceNews

Ray O. Johnson, Operating Partner, Bessemer Venture Partners

Jim Cantrell, CEO and Co-Founder, Phantom Space

Online Course Agenda

WEDNESDAY, JANUARY 13, 2021 - PACIFIC TIME

7:45 – 8:00 am

Log In

8:00 – 8:45 am

Keynote Address: The International Space Station—the 1st Base in Space

- The evolution of the 1st space-based incubator
 - o Overview of research partners of the past and upcoming commercial opportunities
 - o Validating business models and validating in-space facilities
- Initiatives for in-space production and manufacturing
- Strategies for working in unison
- Best practices for a robust and sustainable marketplace
- Monetization of in-space production
- How to build facilities to facilitate future activity

Ken Shields, Vice President and Chief Operating Officer, International Space Station US National Laboratory

8:45 – 9:30 am

Building the In-Space Supply Chain

- In-space servicing
- Robotic systems for in-space assembly and manufacturing
- Building critical infrastructure to support a robust and sustainable in-space economy
- Promoting a B2B marketplace for in-space goods and services

Rob Hoyt, President and Founder, Tethers Unlimited Inc.

9:30 – 10:15 am

A Product Roadmap to Gas Stations in Space™ and Beyond

- Why you should have a “big vision” that isn’t feasible
- Establishing a bustling economy in space
- Solving chicken-and-egg problems
- Identifying commercial product opportunities for in-space infrastructure
- It’s not about the propellant supply chain in orbit (except that it is)
- How we focus on the commercial success of our customers

Daniel Faber, Co-Founder and CEO, Orbit Fab

10:15 – 10:45 a.m

Status & Update on Private Property Rights in Space

- Outer Space Treaty
- Goals of the private space sector
- Impacts on the industrialization of space

Wes Faires, Advocate, Private Space Sector; Founder, Space Rights LLC

10:45 – 11:15 am

The First Privately Financed Mission to the Moon

- Resource extraction
- Cost-effective lunar transportation
- Enabling the development of a lunar industry
- Construction of a lunar industrial platform
- Partnerships & collaborative efforts
- Supply chain needs

Kyle Acierno, CEO, iSpace Technologies U.S.

11:15 am – 12:00 pm

Establishing a Martian Industrial Base

- Goals of the first colony
- Partnerships & collaboration
- Funding needs
- Proposed timelines

Vera Mulyani, CEO & Founder, Mars City Design

Speakers



Kyle Acierno

CEO, iSpace Technologies U.S.

Kyle Acierno is an international expert in commercial space and a specialist in lunar exploration. He acts as the CEO of ispace technologies US, and previously served as the Vice President of Global Sales & Strategy in Tokyo as well as the Managing Director of ispace Europe. ispace managed the front-running competitor in the Google Lunar XPRIZE, Team Hakuto and has raised over \$120M USD to build a lunar transportation system, including a lander and a rover. ispace plans to have its first privately financed mission to the Moon in 2022.

Kyle is a governing member of the International Space University served as a member of the Hague Space Resources Working Group, including acting as the chairman of the technical working group. He received a Masters of Space Studies from the International Space University and Bachelor of Arts in International Security.



Gavin Brown

Executive Director, Michigan Aerospace Manufacturers Association (MAMA)

Gavin Brown is recognized as the leading driving force for promoting aerospace companies active in the State of Michigan by providing aerospace prime contractors and top-tier system integrators with highly qualified sources for their part procurement in commercial, general aviation, rotor and defense.

In 2007, the Michigan Aerospace Manufacturers Association (MAMA) was founded by Gavin and was officially launched as a fully-fledged association with an active membership. The initial membership consisted of thirteen Michigan manufacturing companies.

Since then, Gavin Brown, as the executive director, has worked to promote Michigan manufactures and procure contracts for members companies active in the aerospace and defense markets. The growth of MAMA to over fifty companies continues to increase MAMA presence as an international aerospace component supplier. OEMs, primes and subcomponent aerospace suppliers all use parts manufactured by MAMA members.



Jim Cantrell

CEO and Co-Founder, Phantom Space

Mr. Cantrell is a well-known entrepreneur, automotive executive, the founder of numerous startups, small satellite subject matter expert and has worked on over 45 satellite and deep space missions and has served as an aerospace executive over the past 33 years.

Speakers



James Causey

Executive Director, Global Spaceport Alliance

James Causey is the Executive Director of SpaceCom. He also joined NTP in November 2014 and serves as the Executive Director of SpaceCom, an NTP annual event done in collaboration with NASA's Johnson Space Center and the Houston economic development community. In this capacity, he oversees the strategic direction and day to day operations of all aspects of the event. He coordinates the activities of the Board of Advisors and Industry Advisory Committee setup to focus on event content and attendee experience. He also accesses the professional resources of NTP for sales, operations and marketing to assist the dedicated team of SpaceCom.

Prior to joining NTP, James had over 30 years of diverse experience in varied business and event management roles. Most recently, he was President, Public Sector Media Group at 1105 Media in Vienna, Va. He has held other senior-executive positions at market-leading organizations, including Landmark Communications, Sabot Publishing, Ernst & Young and Cadmus Communications. James has an MBA from University of Maryland and BSc from Leeds Metropolitan University in the UK.



Wes Faires

Advocate, Private Space Sector; Founder, Space Rights LLC

I am an advocate for the forward progress of the concept, with respect to off planet resource utilization under the current legislation, creating a favorable climate for property rights in Outer Space. This includes interacting with competent national authorities of States-Party to the Outer Space Treaty long-term goal of achieving, without litigation, a positive interpretation of the Outer Space Treaty regarding private property rights. On multiple occasions I've attended the United Nations Committee on Peaceful Uses of Outer Space (Legal Subcommittee) as a silent observer on behalf of the private sector.



Gabe Dominocielo

Co-Founder, Chief Strategy Officer, Umbra Lab

Gabe Dominocielo, Co-Founder and Chief Strategy Officer (CSO) of Umbra. Dominocielo is a lifelong entrepreneur with over a decade of experience in law, finance, and company management. Umbra is launching an unrivaled constellation of space-based radar satellites with SAR capabilities, to produce all weather day-night imagery at 25 centimeter resolution for low cost distribution via an integrated web platform.



Daniel Faber

Co-Founder & CEO, Orbit Fab

15+ years space technology leadership. Last 3 years as CEO of Deep Space Industries – building the team, closing millions in financing and growing sales to ~ \$10 million.

Speakers



Andrew Hackleman

Vice President, REACH

Andrew S. Hackleman is the Chief Operating Officer at REACH, a regional economic development organization serving the Central Coast of California. A retired U.S. Air Force Lieutenant Colonel, Hackleman has extensive experience planning and executing mission-critical initiatives. He led efforts to increase the region's housing supply as executive director of the Home Builders Association of the Central Coast from 2017-2019. Before that he was a logistics and supply chain leader for the USAF, stationed at several bases and the Pentagon. He holds master's degrees from Embry-Riddle Aeronautical University and the U.S. Air Force Institute of Technology. He is a native of Atascadero, CA.



Rob Hoyt

President and Founder, Tethers Unlimited Inc.

Dr. Rob Hoyt is a 'relentlessly-inventive' Technologist and Executive with expertise in advanced space technologies, additive manufacturing, plasma physics, and scientific algorithms. He co-founded Tethers Unlimited Inc in 1994 and has built it into a multi-\$M space and defense R&D firm that is pioneering advances in small satellite technologies as well as in-space manufacturing and robotic assembly capabilities. In 2020 he sold TUI to AMERGINT Technologies Holding, a Blackstone-backed venture. He also co-founded ScienceOps Inc., a big-data algorithm and web analytics firm purchased by Acquisio in 2012. Over the past twenty-six years he has pioneered the development of technologies for in-space manufacturing and assembly of space systems, affordable mitigation of orbital debris and radiation belts, propellantless propulsion for spacecraft, and mesh-networked communications for satellites.



Ray O. Johnson

Operating Partner, Bessemer Venture Partners

Dr. Ray O. Johnson is an international business and strategy consultant, serving on numerous Boards of Directors and Advisory Boards. He is currently an Operating Partner with Bessemer Venture Partners. Previously, he was the Senior Vice President and Chief Technology Officer of the Lockheed Martin Corporation, where he led engineering, technology, production operations, global supply chain, program management, and logistics and sustainment. He had responsibility for more than 70,000 people, working on more than 4,000 programs that provide some of the nation's most vital security systems.

Prior to joining Lockheed Martin, he held executive positions with Science Applications International Corporation (SAIC), including Senior Vice President and General Manager of the Advanced Concepts Business Unit. He had a 21 year career in the US Air Force. He interacts at the highest levels nationally and internationally with leaders in government, industry, and academia, and he is frequently sought as an expert in the media and as a speaker on business, strategy, innovation, and education.

Dr. Johnson is a full Academician of the International Academy of Astronautics (IAA) and a fellow of the International Society for Optical Engineering (SPIE), the American Institute of Aeronautics and Astronautics (AIAA), and the Institute of Electrical and Electronics Engineers (IEEE). Dr. Johnson is a member of Eta Kappa Nu, Tau Beta Pi, and Phi Kappa Phi. He holds Ph.D. and M.S. degrees in electrical engineering from the Air Force Institute of Technology and a B.S. degree in electrical engineering from Oklahoma State University.

Speakers



Jeff Matthews

Specialist Leader, Government & Public Sector Space Industry Practice, Deloitte

Jeff is a specialist leader at Deloitte Consulting LLP with more than 19 years of private and public sector experience focused on finance, enterprise architecture transformation, technology commercialization, and market strategy. Currently, he is a leader in Deloitte's Government & Public Sector Space Industry practice where he provides subject matter expertise on commercial space technology trends, industry strategies, and launch systems economics.

Before joining Deloitte, Jeff served as the director of venture strategy and research for the Space Frontier Foundation where he was also a board member. His previous experience as an advisor in \$600M+ of venture capital raises for early stage technology companies, commercializing government technologies, and deep insight into the commercial space market allows him to bring a unique perspective to government and commercial clients. Jeff has contributed expertise and analysis on the space industry to Reuters, Forbes, NBC News, Discovery News, The Wharton School, the Open Group, and the American Institute of Aeronautics and Astronautics (AIAA).



Vera Mulyani

CEO & Founder, Mars City Design

Vera Mulyani is an innovative entrepreneur and visionary leader, with multidisciplinary skills in human centered design and science.

Mulyani has developed a distinct concept of Recycling Cities, which consisted of transforming damaged areas, former industrial and cosmopolitan into self-sustaining Green Zones, (ex. Ruhr, Germany) to better integrate a natural environment into human living space. Mulyani's concept of urbanism on Mars advocates a self-sustaining lifestyle on Earth. Mulyani created the original platform for designing cities on Mars, she is the CEO & Founder of Mars City Design® and the President of Mars City Foundation (501c3). Mars City Design builds prototypes of an urban infrastructure and human lifestyle for Mars, applicable to sustainable smart cities on Earth.



Ken Shields

Vice President and Chief Operating Officer, International Space Station US National Laboratory

Ken Shields is the Vice President and Chief Operating Officer for the Center for the Advancement of Science In Space (CASIS), managers of the International Space Station U.S. National Laboratory (ISS National Lab). Ken first joined CASIS in service of the ISS National Lab in 2012 and during his tenure has directed the flight operations department, served as the NASA Liaison, and led the CASIS STEM education department. In 2017, Ken was awarded NASA's Outstanding Public Leadership Medal and has served on various boards and advisory committees. In his current role as COO for the ISS National Lab, Ken oversees all aspects of the organization's business operations as his team seeks to advance our nation's leadership in commercial space, pursue groundbreaking R&D not possible on Earth, and leverage the International Space Station to inspire the next generation.

Speakers



Alexandre Vallet

Chief, Space Services Department, Radiocommunication Bureau, International Telecommunication Union (ITU)

Alexandre Vallet is the current Chief of the Space Services Department in the Radiocommunication Bureau of the International Telecommunication Union (ITU), since November 2017. Alexandre Vallet began to work in 2000 in the R&D center of Orange dealing with communications satellites. In 2006, he joined the satellite operator Eutelsat where he was in charge of regulatory matters. From 2007 to 2017, he was the Head of the Regulatory affairs and Spectrum/Orbit Resources Department at the French Agency in charge of radio spectrum management (Agence Nationale des Fréquences – ANFR).



Debra Werner

Correspondent, SpaceNews

Debra Werner is a correspondent for SpaceNews and a contributor to Aerospace America. Debra earned a bachelor's degree in communications from the University of California, Berkeley, and a master's degree in Journalism from Northwestern University. She is a recipient of the 1989 Gerald Ford Prize for Distinguished Reporting on National Defense. She publishes a weekly newsletter on the commercial space industry called SN Commercial Drive.

Instruction Methods

Panel Discussions and PowerPoint presentations will be used in the program.

IACET Credits



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 0.8 CEUs for the conference

Online Course Delivery & Participation Details

We will be using Microsoft Teams to facilitate your participation in the upcoming event. You do not need to have an existing Teams account in order to participate in the broadcast – the online course will play in your browser and you will have the option of using a microphone to speak with the room and ask questions, or type any questions in via the chat window and our on-site representative will relay your question to the instructor.

- You will receive a meeting invitation which will include a link to join the meeting.
- Separate meeting invitations will be sent for the morning and afternoon sessions of the online course.
 - You will need to join the appropriate meeting at the appropriate time.
- If you are using a microphone, please ensure that it is muted until such time as you need to ask a question.
- The remote meeting connection will be open approximately 30 minutes before the start of the online course. We encourage you to connect as early as possible in case you experience any unforeseen problems.

Requirements for Successful Completion

Participants must log in each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

Please Select

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JANUARY 12-13, 2021: US \$795 (Single Connection)

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How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

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Account Number

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Billing State

Exp. Date

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OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before December 11, 2020 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other LRA Institute event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, LRA's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at 1 888-305-0392 . LRA reserves the right to alter this program without prior notice.

