

State of the Space Industrial Base 2020
Virtual Solutions Workshop
Agenda
Mountain Daylight Time

Day 1 – May 4, 2020

0745 – 0800 Workshop Start-Up: Administrative

0800 – 0810 Welcome

Ms. Casey Anglada DeRaad, NewSpace New Mexico

0810 – 0910 Introduction Panel – Motivation, Goals, Structure and Products

Panel Chair: Col. Eric Felt, Air Force Research Laboratory

Panel Speakers:

Brig Gen. Bucky Butow, Defense Innovation Unit

Dr. Tom Cooley, Air Force Research Laboratory

Dr. Joel Mozer, US Space Force

Col. Curtis Hernandez, National Space Council

0910 – 0930 Summary of Past Studies and Reports

Dr. David Hardy, Apogee supporting Air Force Research Laboratory

0930 – 1030 Space Information Services Overview Panel

Panel Chair: Dr. Peter Wegner, Spaceflight Industries

Panel Speakers:

Dr. Jeremy Banik, National Reconnaissance Office

John Serafini, HE360

Payam Banazadeh, Capella

Robbie Schingler, Planet

1030 – 1045 Discussion

1045 – 1130 Space Transportation & Logistics Overview Panel

Panel Chair: Gordon Roesler, Riverside Research supporting Defense Innovation Unit

Gary Henry, SpaceX

Brett Alexander, Blue Origin

Lars Hoffman, Rocket Lab USA

Bernard Kutter, United Launch Alliance

Carol Welsch, Northrop Grumman

Mandy Vaughn, Vox Space

Chris Kemp, Astra

1130 – 1145 Discussion

1145 – 1215 Space Power Overview Panel

Panel Chair: Peter Garretson, Apogee supporting Air Force Research Laboratory

James Winter, Air Force Research Laboratory

Patrick McClure, Los Alamos³⁰ Research Laboratory

Jay Penn, Aerospace

Brad Clevenger, SolAero Technologies

John Mankins, Mankin Space Tech

Paul Jaffe, Navy Research Laboratory

1215 – 1230 Discussion

1230 – 1245 Working Groups Overview and Objectives

Brig Gen. Bucky Butow, Defense Innovation Unit

1245 – 1330 Lunch Break

1330 – 1500 Working Groups Breakout Session: Current State of the Space Industrial Base

Working Group 1: Space Information Services

Chair: Dr. Tom Cooley, Air Force Research Laboratory

Co-chair: Dr. Peter Wegner, Spaceflight Industries

Working Group 2: Space Transportation & Logistics

Chair: Brig Gen. Bucky Butow, Defense Innovation Unit

Co-chair: Gordon Roesler, Riverside Research supporting Defense
Innovation Unit

Working Group 3: Space Power

Chair: Peter Garretson, Apogee supporting Air Force Research
Laboratory

Co-chair: Dr. David Hardy, Apogee supporting Air Force Research

Laboratory

1500 – 1530 Break

1530 – 1700 Working Groups Breakout Session: Key Milestones and Challenges

Working Group 1: Space Information Services

Chair: Dr. Tom Cooley, Air Force Research Laboratory

Co-chair: Dr. Peter Wegner, Spaceflight Industries

Working Group 2: Space Transportation & Logistics

Chair: Brig Gen. Bucky Butow, Defense Innovation Unit

Co-chair: Gordon Roesler, Riverside Research supporting Defense
Innovation Unit

Working Group 3: Space Power

Chair: Peter Garretson, Apogee supporting Air Force Research
Laboratory

Co-chair: Dr. David Hardy, Apogee supporting Air Force Research

Laboratory

Day 2 – May 5, 2020

0815-0830 Workshop Start-Up: Administrative

0830 – 0900 Human Presence Overview Panel

Panel Chair: Mike Suffredini, Axiom

Panel Speakers:

Mike Moses, Virgin Galactic

Marybeth Edeen, NASA Johnson Space Center

Rick Tumlinson Earthlight Foundation

Dr. Stephen Robinson, UC-Davis (former Astronaut)

0900 – 0915 Discussion

0915 – 0945 Space Manufacturing & Resource Extraction Overview Panel

Panel Chair: Bruce Pittman, NASA Space Portal/NSS

Panel Speakers:

Dennis Wingo, SkyCorp

Elliott Carol, Lunar Resources

Joel Sercel, TransAstra

0945 – 1000 Discussion

1000 – 1030 NASA Presentation

Doug Loverro, Associate Administrator for the Human Exploration and Operations Mission Directorate, NASA

1030 – 1115 Space Policy & Finance Overview Panel

Panel Chair: Steve Nixon, SmallSat Alliance

Panel Speakers:

Steve Kitay, Office of Secretary of Defense, Space Policy

Kathy Trimble, Council on Competitiveness

Mir Sadat, Defense Intelligence Agency

Kevin O'Connell, Department of Commerce

Pav Singh, Defense Innovation Unit

Mr. Bruce Cahan, Urban Logic

1115 – 1130 Discussion

1130 – 1145 Working Groups Overview and Objectives

Brig Gen. Bucky Butow, Defense Innovation Unit

1145 – 1230 Lunch break

1230 – 1400 Working Groups Breakout Session: Current State of the Space Industrial Base

Working Group 4: Human Presence in Space

Chair: Bruce Pittman, NASA Space Portal/NSS

Co-chair: Rick Tumlinson

Working Group 5: Space Manufacturing & Resource Extraction

Chair: Dr. Joel Mozer, US Space Force

Co-chair: Dr. Michele Gaudreault, US Space Force

Working Group 6: Space Policy & Finance

Chair: Mir Sadat, Defense Intelligence Agency

Co-chair: Pav Singh, Defense Innovation Unit

1400 – 1430 Break

1430 – 1600 Working Groups Breakout Session: Key Milestones and Challenges

Working Group 4: Human Presence in Space

Chair: Bruce Pittman, NASA Space Portal/NSS

Co-chair: Rick Tumlinson

Working Group 5: Space Manufacturing & Resource Extraction

Chair: Dr. Joel Mozer, US Space Force

Co-chair: Dr. Michele Gaudreault, US Space Force

Working Group 6: Space Policy & Finance

Chair: Mir Sadat, Defense Intelligence Agency

Co-chair: Pav Singh, Defense Innovation Unit

Day 3 – May 6, 2020

0745 – 0800 Workshop Start-Up: Administrative

0800 – 0900 Plenary Session – Status Reports from Working Groups

Dr. Tom Cooley, Air Force Research Laboratory

Brig Gen. Bucky Butow, Defense Innovation Unit

Peter Garretson, Apogee supporting Air Force Research Laboratory

Bruce Pittman, NASA Space Portal/NSS

Dr. Joel Mozer, US Space Force

Mir Sadat, Defense Intelligence Agency

0900 – 1030 Working Groups Breakout Sessions: Near-Term

Recommendations

All six working groups in parallel

Working Group 1: Space Information Services

Chair: Dr. Tom Cooley, Air Force Research Laboratory

Co-chair: Dr. Peter Wegner, Spaceflight Industries

Working Group 2: Space Transportation & Logistics

Chair: Brig Gen. Bucky Butow, Defense Innovation Unit

Co-chair: Gordon Roesler, Riverside Research supporting Defense

Innovation Unit

Working Group 3: Space Power

Chair: Peter Garretson, Apogee supporting Air Force Research

Laboratory

Co-chair: Dr. David Hardy, Apogee supporting Air Force Research

Laboratory

Working Group 4: Human Presence in Space

Chair: Bruce Pittman, NASA Space Portal/NSS

Co-chair: Rick Tumlinson

Working Group 5: Space Manufacturing & Resource Extraction

Chair: Dr. Joel Mozer, US Space Force

Co-chair: Dr. Michele Gaudreault, US Space Force

Working Group 6: Space Policy & Finance

Chair: Mir Sadat, Defense Intelligence Agency

Co-chair: Pav Singh, Defense Innovation Unit

1030 – 1045 Break

1045 – 1215 Working Groups Breakout Sessions: Long-Term Recommendations

All six working groups in parallel

1215 – 1300 Lunch Break

1300 – 1430 Working Groups Breakout Sessions: Key Findings and Recommendations

All six working groups in parallel

Day 4 – May 7, 2020

0745 – 0800 Administrative & Welcome

0800 – 0915 Working Groups Key Findings and Recommendations

Space Information Systems: Dr. Tom Cooley, Air Force Research Laboratory

Space Transportation & Logistics: Brig Gen. Bucky Butow, Defense Innovation Unit

Space Power: Peter Garretson, Apogee supporting Air Force Research Laboratory

0915 – 0930 Break

0930 – 1045 Working Groups Key Findings and Recommendations continued
Human Presence: Bruce Pittman, NASA Space Portal/NSS

Space Manufacturing & Resources Extraction: Dr. Joel Mozer, US
Space Force

Space Policy & Finance: Mir Sadat, Defense Intelligence Agency

1045 – 1100 Break

1100 – 1215 Roundtable on Key Findings and Recommendations with
Workgroup Leads – Moderated by Col Eric Felt, Air Force Research Laboratory
Dr. Tom Cooley, Air Force Research Laboratory
Brig Gen. Bucky Butow, Defense Innovation Unit
Peter Garretson, Apogee supporting Air Force Research
Laboratory

Bruce Pittman, NASA Space Portal/NSS
Dr. Joel Mozer, US Space Force
Mir Sadat, Defense Intelligence Agency

1215 – 1245 Summary: 2020 Report
Dr. David Hardy, Apogee supporting Air Force Research
Laboratory

1245 – 1300 Closing Remarks
Casey Anglada DeRaad, Joel Mozer, Brig Gen. Bucky Butow, Col.
Eric Felt, Tom Cooley, Peter Wegner

1300 End of Workshop