







Building a Thriving Space Enterprise at Vandenberg AFB

We firmly believe that the next decade will be transformative for U.S. commercial and defense space capabilities. This decade of transformation presents a unique opportunity to capitalize on the growing commercial space industry activities and attract additional commercial activity to Vandenberg AFB and the surrounding region. It is through this lens that our team has come together to develop a master plan for Vandenberg AFB that supports the United States Space Force mission and positions California as a global leader in the future of the commercial space industry.

Leaders from the State of California, REACH, the 30th Space Wing, Cal Poly State University and Deloitte have announced a commitment to develop a thriving spaceport at Vandenberg Air Force Base and the surrounding area. According to the memorandum of understanding, the parties will 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.

We collectively invite you to learn more, reach out, and join us on this journey towards tomorrow.

A Bold Challenge for California

Together, we can imagine a bold future where there is a developed commercial space enterprise in the Central Coast that contains a sustained presence from companies across the value chain and....



Supports regular orbital space launch from multiple launch service providers

- >> Enables and supports the military and commercial use of responsive access to space
- >> Is home to multiple vertical launch providers and at least one horizontal launch provider
- Operationally responsive space is enabled and supported through horizontal and vertical launch providers



Is home to an ecosystem for logistics, downstream applications, and testing and evaluation capabilities

- Integrates the commercial and government ecosystem for Space Domain Awareness
- >> Provides the conditions to attract and sustain downstream applications providers



Expands the roles of universities in Space Domain Awareness, technology transfer, and innovation

...enables sustained human spaceflight to orbit and orbital destinations for the first time in California.









A Vision for the Future of Vandenberg AFB

What do we want to do?

The Market View

We recommend a focus on leading in the 1) launch services, 2) logistics, and 3) downstream applications segments of the value chain.

The Operations View

We recommend a focus on 1) continuing to support strategic (heavy) launch for all users while enabling operationally responsive space.

The Development View

We recommend a focus on developing a space cluster centered around launch, logistics (SSA/SDA), and downstream applications.

How are we going to do it?

Grow Launch Services Activities

Focus area: Increase capabilities at Vandenberg AFB and the Western Range to support additional launch types and concepts of operations inclusive of most launch architecture types

Outcomes: Diversifies launch activities beyond heavy launch to include horizontal (air launch), small vertical launch, and potential other emerging concepts

Build an Ecosystem for Downstream Applications

Focus area: Build the regional ecosystem to support downstream applications (space data and services) companies and the associated workforce

Outcomes: Diversifies the space companies and associated value chain components within the region by providing a more continuous workforce presence

Create Capabilities for Testing & Evaluation

Focus area: Create capabilities for testing and evaluation in support of launch and downstream applications

Outcomes: Diversifies the aerospace and defense presence within the region and provides sustainable operations and a more continuous workforce presence within the region

What do we need to achieve this vision?

- Targeted investment in supporting and enabling on-base infrastructure
- Creation of the Commercial Space Zone
- Targeted investment or improvements in regional infrastructure including those that support workforce transportation to/from other major hubs
- Utilization of incentivization "levers" to support the growth of the commercial space user base across the launch services and downstream segments of the value chain
- Support from key stakeholder groups at the federal, state, regional, and local levels
- Development of a skilled workforce by building a talent pipeline and/or relocating talent

What do we get in the end?

Increased number of LSPs that provide most of the CONOPS and vehicle classes: 5-7 LSPs focused on Small/ORS, Medium/TRS, Heavy/Ultra Heavy, and Horizontal

Creation and development of the Commercial Space Zone (CSZ)

Developed, sustained presence of technology companies to the CSZ focused on Space Domain Awareness, Downstream Applications, and Ground Systems

This publication contains general information only, and none of the member firms of Deloitte Touche Tohmatsu Limited, its member firms, or their related entities (collective, the "Deloitte Network") is, by means of this publication, rendering professional advice or services. Before making any decision or taking any action that may affect your business, you should consult a qualified professional adviser. No entity in the Deloitte Network shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

any loss whatsoever sustained by any person who relies on this publication.

As used in this document, "Deloitte" means Deloitte Consulting LLP, a subsidiary of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte USA LLP, Deloitte LLP and their respective subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.

Copyright © 2020 Deloitte Development LLC

All rights reserved. Member of Deloitte Touche Tohmatsu Limited