MEMORANDUM

Date: August 31, 2018

To: The Honorable Chairman and Members
    Pima County Board of Supervisors

From: C.H. Huckelberry
    County Administrator

Re: World View CTO named head of national commercial space flight advocacy group;
    Vector rocket manufacturing building set to enter construction phase

On the same day that the Arizona Supreme Court let stand a Court of Appeals ruling in our favor in the Goldwater Institute’s lawsuit over our World View economic development agreement, World View and the Commercial Spaceflight Federation announced that World View’s Chief Technology Officer and co-founder Tabor MacCallum will serve as the Federation’s new chairman of the board.

This announcement further demonstrates that World View is a well-respected space technology firm and an important aerospace partner for Pima County and the region’s economic development. Among the 80 members of CSF are, SpaceX, owned by Tesla founder Elon Musk, Blue Origin, owned by Amazon founder Jeff Bezos, Virgin Galactic, owned by Richard Branson, and all of the country’s major commercial spaceports, including Space Florida. Vector also is a member, as is Arizona State University. The University of Arizona is an educational affiliate.

According to CSF’s press release it is, “laying the foundation for a sustainable space economy and democratizing access to space for scientists, students, civilians, and businesses. CSF members are responsible for the creation of thousands of high-tech jobs driven by billions of dollars in investment. Through the promotion of technology innovation, CSF is guiding the expansion of Earth’s economic sphere, bolstering U.S. leadership in aerospace, and inspiring America’s next generation of engineers and explorers.”

World View continues to launch its innovative payloads at Spaceport Tucson and now has more than 90 employees who have an average salary of $78,000.

World View should soon have neighbor in the Aerospace Research Campus. Pima County Department of Transportation has completed the southern extension of Raytheon Parkway, which will serve as the access road for Vector’s rocket manufacturing facility.
Vector is completing its negotiations with its construction partner that will build the plant and lease it to Vector. Vector owner Jim Cantrell, a former SpaceX executive, is bullish on developing the Aerospace Research Campus, telling KTVK in Phoenix that his small rocket and small satellite launch systems will attract other aerospace firms and satellite manufacturers to the ARC.

The continued growth and progress of these innovative aerospace firms are proof of the wisdom of the County’s purchase of the Raytheon buffer area, the relocation of Aerospace Parkway, the economic development agreement with World View and the creation of the ARC to attract firms like Vector.

CHH/mp

Attachments

c: Jan Lesher, Chief Deputy County Administrator
    Carmine DeBonis, Deputy County Administrator for Public Works
    Tom Burke, Deputy County Administrator for Administration
    John Voorhees, Assistant County Administrator
    John Moffatt, Director for Economic Development Office
The Commercial Spaceflight Federation (CSF) announced today that Taber MacCallum, Co-founder and Chief Technology Officer of World View, will serve as the new Chairman of the Board of CSF.

“Taber brings an enormous amount of expertise and clout to the organization, and we are thrilled that he has agreed to take on this important industry leadership role,” said Eric Stallmer, CSF President. “CSF and its members will no doubt benefit from Taber’s experience and intellect, and we look forward to working together to continue to grow our ranks and expand CSF’s voice as a recognized expert in commercial space.”
The Commercial Spaceflight Federation Elects New Chairman of the Board and Leadership

The Commercial Spaceflight Federation (CSF) announced today that Taber MacCallum, Co-founder and Chief Technology Officer of World View Enterprises, will serve as the new Chairman of the Board of CSF.

George Whitesides, Chief Executive Officer of Virgin Galactic and The Spaceship Company, and Karina Drees, Chief Executive Officer and General Manager of Mojave Air and Space Port, will continue in their current roles as Vice Chairman and Treasurer, respectively.

Todd Lindner, Senior Manager of Planning and Spaceport Development for the Jacksonville Aviation Authority, Tim Hughes, Senior Vice President, Global Business and Government Affairs for SpaceX, and Bretton Alexander, Vice President, Government Sales and Strategy at Blue Origin, were elected as Officers at Large.

As Co-founder and CTO of World View, MacCallum has grown the business from a simple idea to a Silicon Valley backed global leader in stratospheric flight technology. MacCallum spearheaded the development of World View’s new Stratollite vehicle, a first-of-its-kind navigable and persistent stratospheric flight vehicle for remote sensing and communications applications. Prior to World View, MacCallum served as Co-founder, CEO and CTO of Paragon Space Development Corporation and also served as CTO and Safety Officer of Project StratEx, launching Google Executive Alan Eustace to the edge of space under a helium balloon for his record-breaking flight in 2014. MacCallum is a founding member Biosphere 2 design team and a crew member in the original 2-year mission inside the three-acre materially closed ecological system. He has also testified before congress on commercial space regulation and serves on FAA Aviation Rulemaking Committees.

"Taber brings an enormous amount of expertise and clout to the organization, and we are thrilled that he has agreed to take on this important industry leadership role," said Eric Stallmer, CSF President. "CSF and its members will no doubt benefit from Taber’s experience and intellect, and we look forward to working together to continue to grow our ranks and expand CSF’s voice as a recognized expert in commercial space."

"I am honored and privileged to have the opportunity to serve as Chairman of the Commercial Spaceflight Federation," said Taber MacCallum. "I’m inspired by the great work and progress this body and its leadership have already accomplished, and I look forward to continuing that work in what will no doubt be an exciting and important year for the commercial spaceflight industry."
During the meeting, CSF and its members acknowledged the pivotal role of Dr. Alan Stern of Southwest Research Institute as well as World View’s Co-founder and Chief Scientist, who served as chairman for the past two years.

The announcements were made at CSF’s bi-annual Executive Board of Directors meeting, held in Denver, Colorado, and hosted by Sierra Nevada Corporation (SNC).

**About the Commercial Spaceflight Federation**

The Commercial Spaceflight Federation (CSF) is the leading voice for the commercial spaceflight industry. Founded in 2006, CSF and its 80+ members are laying the foundation for a sustainable space economy and democratizing access to space for scientists, students, civilians, and businesses. CSF members are responsible for the creation of thousands of high-tech jobs driven by billions of dollars in investment. Through the promotion of technology innovation, CSF is guiding the expansion of Earth’s economic sphere, bolstering U.S. leadership in aerospace, and inspiring America’s next generation of engineers and explorers.

**About World View® Enterprises, Inc.**

World View’s innovative flight technologies offer a unique perspective of Earth from the edge of space. World View delivers meaningful insights to enterprises, agencies, and individuals via two primary business segments: Stratolite un-crewed flight systems and Voyager human spaceflight systems. Stratolites, in operation today, offer low-cost, long-duration, persistent high-altitude flight for enterprise and government agencies. Using advanced stratospheric balloon technology, Stratolite applications include communications, remote sensing, weather, and research. The Voyager human spaceflight experience will leverage existing Stratolite development and operations experience to one day offer private citizens a comfortable, safe, and perspective-changing voyage to the edge of space via high-altitude balloon. To learn more about World View, visit [www.WorldView.space](http://www.WorldView.space).

**MEDIA CONTACTS**

Andrew Antonio  
302-383-7244  
[andrew@worldview.space](mailto:andrew@worldview.space)

Angelica DeLuccia  
Griffin Communications Group  
(321) 506-2183  
[angelica@griffincg.com](mailto:angelica@griffincg.com)

Diane Smiroldo  
Smiroldo Communications  
(703) 819 - 1963  
[diane@smiroldocommunications.com](mailto:diane@smiroldocommunications.com)
Tucson factory is building rockets and Space City

Posted: Aug 22, 2018 11:55 AM MST
Updated: Aug 23, 2018 9:40 AM MST

By Jaime Cerreta

(3TV/CBS 5) - An Arizona business is hoping to change the space game.

Vector is a 2-year-old company, founded by some of the same guys who created SpaceX.

They have big plans for Arizona and those plans start with a lighter and less expensive rocket.

[READ MORE: Good Morning Arizona stories]

The rockets can be put into space very quickly and will place satellites in orbit.

"Three of our founders were in the beginning with SpaceX. We were the guys who helped Elon Musk understand he could actually build a rocket himself," says Vector CEO Jim Cantrell. "Two of our founders were building rockets in their garages."

And that's pretty much what Vector is doing now - building rockets just a block from U of A in Tucson inside a tan warehouse.

The Vector-FR rockets stand about 45 feet tall, almost as tall as a three-story building.

The launch pad is mobile. The rockets cost $1.5 million, compared to $100 million for the traditional large rockets.

After takeoff, the first part of the rocket will break away falling into the sea. The second part continues some 250 miles into orbit where the nose cone opens and flings small satellites into space. That part of the rocket will then burn up on its own.

The satellites are about the size of a loaf of bread or as big as a printer.

Vector's customers are communications businesses, satellite imaging companies and sometimes NASA or even the Department of Defense.

Vector could quickly and easily replace satellites that are destroyed in space.

"This becomes a deterrent to actual warfare in space," says Cantrell.

He hopes to launch his rockets four and five times a week by following the model of the Ford Model T.

"Part of what we're doing is we're able to make them cheap. We're able to make them fast and hopefully more reliable because they're simple," says Cantrell.

Like Henry Ford, Cantrell plans to use an assembly line to make his rockets and build many parts on the property.

going up around it.

He says Vector will employ about 400 people but the business will create many offshoot jobs like satellite builders.

"Arizona has an enormous labor pool and infrastructure and supply chain to support aerospace," says Cantrell.

He says it would push millions into the economy over the next five years while sending Arizona made rockets into space.

Vector will be testing its mobile launch pad in the Mojave Desert in the very near future.

It has launch sites in Alaska, California and Virginia and will be sending its first rocket into space from Kodiak Island, Alaska in October.