Report to the Oregon Joint Committee on Ways and Means Subcommittee on Transportation and Economic Development

February 16, 2016

Chuck Allen
Executive Director

The promise of the Unmanned Aircraft System (UAS) industry remains as promising today as it was three years ago, with multiple, independent estimates of nationwide economic growth in the billions of dollars over the next three to five years. We continue to believe that Oregon can claim a reasonable portion of the business, and with the support of the state, SOAR has, and continues to make prudent, judicious investments in the UAS industry and our three FAA-designated UAS Test Ranges.

As with any emerging technology, the establishment of new organizations, and the rapidly evolving regulatory environment, there are challenges. SOAR has developed a strategy to manage these challenges, yet to also retain flexibility to effectively and successfully address the inevitable changes of this growing industry and its external environment.

A Brief History

In 2012, a statewide coalition led by Economic Development of Central Oregon, Oregon State University, and the regional chapter of a UAS trade association, AUVSI, began a formal effort to put Oregon at the forefront of the rapid shift of drone (UAS) technology from military to civilian uses. At the same time, the FAA launched a program to select six UAS test sites for civilian applications around the country. The state coalition pursued state funding through the Oregon Innovation Council and also sought selection as an FAA Test Site. EDCO drove the application for a state grant, while OSU drove the Test Site application. The understanding was that both efforts, if successful, would come together under the new nonprofit funded by the state. This became SOAR Oregon.

Ultimately, the Oregon coalition determined that the only reasonable chance of success with the Test Site application was to partner with the University of Alaska, Fairbanks (UAF) and Hawaii. This Pan-Pacific UAS Test Complex (PPUTRC) was selected as one of six FAA-designated test sites at the end of 2013. This occurred shortly after SOAR received a state grant and almost simultaneously with SOAR receiving its first tranche of funding from the state. Much of SOAR's energy was eventually directed to support of the three ranges at Pendleton, Warm Springs, and Tillamook.

Management

Rick Spinrad, Vice President of Research at OSU, oversaw the creation of SOAR as its first president. Collins Hemingway was the first, and interim, executive director for SOAR, under the guidance of Spinrad and a 12-person board (See Attachment 6). Hemingway was charged with completing the organizational documents and overseeing the hire of a permanent ED. Mark Morrisson was hired in January 2014 and served until April 2015, when Chuck Allen took over the role. When Spinrad left OSU to join NOAA in 2014, Hemingway was elected president. With the new biennium, Craig Ladkin took over as president. Hemingway remains on the board as Treasurer.

Mark Morrisson initiated the effort to secure FY15 - 17 biennium funding for range operations. The initial funding request was for $7.1MM, but was later reduced to $3.5MM. Eventually, the Legislature approved a grant of $3.0M for SOAR, with the balance of range funds being managed through IFA/SRF funds.

2013 - 2015 Biennium

SOAR, which had sought a grant of $3.0M for the 2013-15 biennium, received $882,000 in actual funding. The primary focus for SOAR was to stimulate industry growth, support the ranges, initiate marketing of the state, and educate state officials and the congressional delegation on the potential for the industry in Oregon. Receiving only 30 percent of its requested funding, SOAR did not have the resources to take on all the projects envisioned in its original funding request.

SOAR has always believed that the best opportunity for industry growth was through the build-up of related products and services around areas with significant UAS flight activity. The immediate opportunity for the state, therefore, appeared to be three test ranges that were named as part of the PPUTRC.

However, the PPUTRC, and flights related to it, have been slow in developing. The PPUTRC is an entity consisting of UAF, and two partner states; Hawaii and Oregon. It reports to UAF as well as to the FAA. The leadership and operational structure for the PPUTRC has been in flux since its creation, partly because UAF changed the structure to give its partners less say and also because of turnover in all of its senior management. FAA rules, procedures, and guidelines also have been constantly changing. In addition, our own ranges were in their infancy and the PPUTRC didn't have adequate, mature procedures in place to authorize flights that were acceptable to the FAA. The Test Ranges ended up in a complex and slow- moving bureaucracy.

In accordance with the original PPUTRC proposal to the FAA, and in order to help the Oregon ranges deal with these and related issues, SOAR hired—with the encouragement of Business Oregon—a Chief Operations Officer to work as the ranges' champion and single point of contact with UAF. The COO initiated, and gained UAF support for a months' long effort leading the refinement of the processes and procedures that were missing at UAF, resulting in a significantly improved and formally released "General Operations Manual" (GOM). This is the manual that clarifies and assigns responsibilities for all the necessary activities and paperwork to meet the FAA requirements to get flights in the air at any of the ranges of the PPUTRC.

SOAR also provided $120,000 of funding to the ranges to offset some of their startup costs with the PPUTRC. This was in addition to funding from other sources like the City of Pendleton and the Warm Springs Reservation.

Additionally, SOAR dispensed grants to UAS businesses that were leveraged in excess of $2MM over the biennium and the industry created or retained in excess of 50 jobs. A synopsis of the final audit report is attached as Attachement 7.

Most of SOAR's time and energy was spent on activities and marketing in promotion of the UAS test ranges and industry in Oregon. This was done primarily by a single employee, the ED, and various board members. Because of the limited budget, the hiring of the COO precluded the hiring of other business-related personnel. Both SOAR and Business Oregon believed that the hiring of the COO was the right strategic decision for 2015, but the decision also meant that most business-development programs were deferred until 2015-17.

Well before the FAA's UAS Test Site selection, and during the startup phase for our ranges and the PPUTRC, it was understood that the FAA was designating the test sites to provide operational testing for public and commercial UAS, in accordance with the FAA Modernization and Reform Act of 2012 (2012 FMRA), which legislatively established the test sites in the first place. **Commercial use** is the critical element for industry growth, both in the development and testing of flight systems and in the general use of UAS in the national airspace.

However, the FAA has done little to enable the test ranges to support commercial operations. The FAA's focus for the Ranges is, and has been, the conduct of aeronautical research that benefits the FAA under a bureaucratically cumbersome set of rules known as Public Aircraft Operations (PAO), which diminishes prospective customers' enthusiasm for using the ranges. In essence, every flight has to be done by a "public entity" such as UAF or OSU, and all commercial uses have to be shoehorned into some kind of public use. This seemingly small wrinkle has created significant difficulties in the effort to generate volume business for the ranges. As the result, few FAA Test Sites have seen significant commercial use - although this could change if and when the FAA accedes to congressional instructions and adds "commercial" aircraft operations to the range's mandate.

At the same time, per the 2012 FMRA, the FAA began issuing Section 333 exemptions, which provide a mechanism for flying UAS for commercial purposes in the National Airspace System (NAS). These exemptions were trickling out of the FAA until June of 2015 – after which the FAA began approving these exemptions at an ever increasing rate. Today, there are about 3300 active 333 exemptions for UAS manufacturers and operators.

Although the FAA has approved these Section 333 exemptions almost exclusively for small UAS (under 55 lbs.), this has further eroded the perceived value of the test ranges, particularly in the eyes of prospective commercial customers, and of those companies interested in testing and operating smaller UAS.

This background is important because all of this has happened while Oregon and other states have attempted to make their Test Sites sustainable. SOAR's position is that we will not rely strictly on flights done under the aegis of the PPUTRC but will work with our test ranges, and with companies that may wish to fly elsewhere in the state, to get them flying through whatever legal mechanisms we can. We will drive business to the ranges through marketing and grant incentives, though we will not require customers to fly at a range if their needs do not coincide with range capabilities or location.

UAS Test Ranges

While we believe that the ranges are potentially valuable assets to the State for the development of the UAS industry, we believe it is in the taxpayers' interests to be judicious in the timing and manner in which the State's money is allocated to them. The ranges have only recently begun to see commercial flight activity, and while we expect this to grow, it won't be as rapidly as originally envisaged. While there is promise of increased commercial activity at the Ranges driven by the need to test and certify larger and more sophisticated UAS, the FAA continues to move slowly in developing the rules and procedures for these activities.

Our original request of the State indicated that we would initially support the Pendleton test range, and once it became fully operational, we would begin supporting the next most viable range. However, there was significant interest in providing support simultaneously to all three ranges, but initially at levels less than originally planned. This was not necessarily a dilutive approach, as each range has unique capabilities and needs, and all three are beginning to develop activity that could become significant over the next 12 - 18 months. An overview of our allocation of funds can be found in Attachment 2.

As a result, SOAR determined that funding to the ranges needs to be time-phased based on their needs as they ramp up customer activity. We have approved funding for the Pendleton Range to support a Range Manager; for Warm Springs, a Range Manager and an additional support person; and for Tillamook, a Range Manager and a Range Safety officer. The reason for the additional support at Tillamook is their current activity and level of business which appears to be increasing.

The current allocation of funds to range operations and support staff amounts to about $1.1MM. We intend to use $670K to support industry grants and outreach programs in education and public safety, while the balance of the funds are being allocated to marketing activities on behalf of the ranges and the Oregon UAS industry, as well as for SOAR operations.

SOAR intends to focus significant effort on range support even beyond the range labor grants. Our commitment to the ranges include the items shown in Attachment 3 which is taken from the MOA that SOAR has developed in conjunction with the ranges.

Industry Grants

Our intention is to allocate grants of under $100K to businesses that provide a plan that will materially contribute to the State's value as a base for UAS business activity. We intend to focus on newly established, high-growth businesses that could be significant players in the industry whether they make airframes, sensors or ancillary support products that will be needed by other businesses. We will focus on software developers where we can because this will be the heart of the business.

We have developed an RFP document for grant submission that spells out that we are looking for businesses that will create jobs and bring in additional follow-on funding. This RFP

procedure also clearly states that SOAR will favor proposals that incorporate the use of the Oregon Test Ranges as part of their program. This document will be published on the SOAR website. (www.soaroregon.com).

Marketing and Outreach

SOAR has also been developing an aggressive marketing program that incorporates significant digital resources and assets to increase exposure to Oregon's UAS industry, and to extend our reach. We have included a breakdown of our marketing program as Attachment 4 and the formal budget used in the Statement of Work with Business Oregon in Attachment 5. It should be noted that in addition to SOAR's marketing support for the Oregon UAS industry, our marketing program includes extensive support for the Test Ranges, including range services' promotion, placement and improving the UAS industry focus on range differentiation.

In order for Oregon to organically develop a vibrant UAS industry over the next few years, it is imperative to lay the groundwork today. The majority of drone publicity today is about privacy concerns and interference with public safety operations. Unfortunately, the message about the exciting benefits of this technology seems to be limited to a few words about Amazon drone delivery services. To bridge this gap, we must highlight the many applications where UAS can save time, money, and even lives.

We intend to launch an extensive outreach and education program to schools through the six Oregon STEM hubs that will introduce middle and high-school students to the value and versatility of drones as well as instill an interest that will manifest itself later as a desire to work in the industry. We are currently working to create model career technical education (CTE) and drones-in-STEM curriculum and programs which can be easily implemented by schools across the state. We are also working with the state's network of community colleges to ensure that their UAS programs are well-resourced to feed the state's future UAS labor pool.

Equally as valuable, we will use the outreach program to provide resources, leadership and guidance to public safety organizations, state-wide, demonstrating the value of using drones for the many specialized missions that they encounter. Just a few of these missions include include wild fire fighting, urban fire management, search and rescue, fugitive search, locating lost persons in the wilderness, and providing public safety organizations safe, effective access to normally inaccessible areas such as river gorges, etc.

We already have many of the key components in place to make Oregon an attractive location for UAS development. We have strong government support, established UAS industry clusters, and access to a wide breadth of testing and commercial-use environments. We feel that education and high-visibility demonstrations with life-saving implications are the best way to help Oregonians appreciate the value of this exciting new technology. The sooner we can start with public education about the benefits of drones and the career opportunities that follow, the sooner we can make Oregon the best place in the country for UAS business.

Plan Overview
Our business plan has changed somewhat since the last time we were before this committee. We are still providing significant support to the ranges, both in funding as well as administrative, marketing and legislative support. However, in support of the other facets of our mission, we are equally as focused on developing Oregon as the place to establish and operate a UAS business. We are doing this through a combination of financial grants to help establish and grow UAS businesses, as well as building a drone-literate population in the state to develop the next generation of entrepreneurs and workers in this exciting industry. Our marketing plan is multi-faceted and encompasses electronic media including web and social media resources and significant outreach to education and public safety. We have also targeted several trade events where we have the opportunity to promote the test ranges and the Oregon UAS industry.

Staff
SOAR employs four staff.

Chuck Allen is the Executive Director responsible for the overall operation of the business.

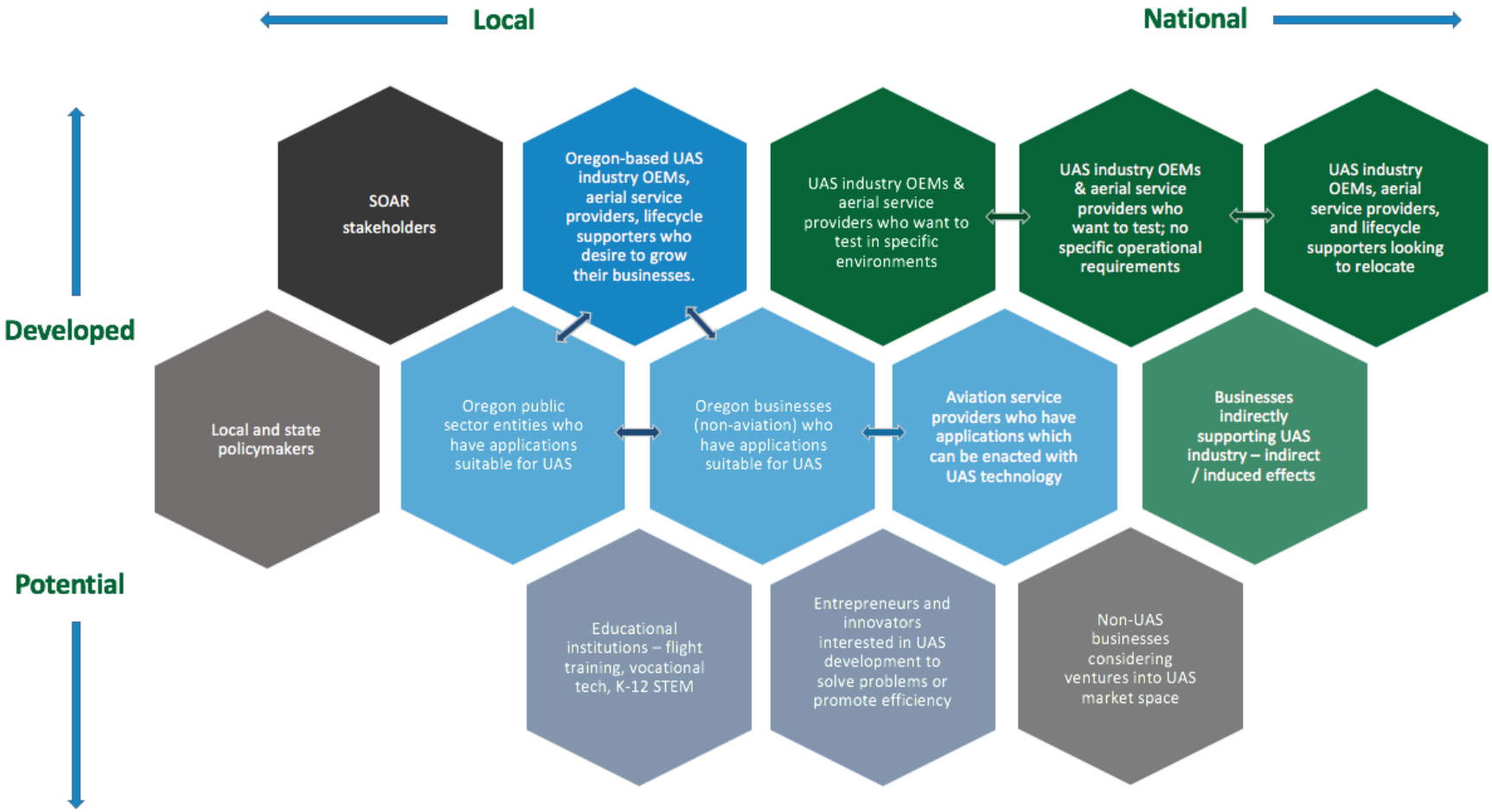
John Stevens is the Chief Operations Officer. His role is directly aligned with SOAR and PPUTRC objectives by providing operational, procedural, technical, and regulatory guidance to the Oregon UAS test ranges and UAS industry on the evolving regulatory environment and UAS test operations. John is a retired U.S. Marine Corps Officer, and has over two decades of direct operational experience and program management in manned and unmanned aviation, in both the defense and commercial sectors. His recent experience includes several years of manned and unmanned flight test and test range management experience, including working closely with the FAA on aircraft certification projects.

Scott Kinney is responsible for business development and marketing. Scott has a long history in this area and has already demonstrated the value of having a seasoned veteran in this role. He has been working directly with the test ranges on several occasions and specifically on initiatives at Pendleton and Warm Springs.

Aileen Lennon is our Media and Business Development Associate. She works as the administrative assistant to the board of directors, but more importantly, she assists Scott with social media and marketing activities. Her background and experience in wildlife will prove valuable as we begin to approach those areas of local government.

Expenditures to Date
The contract with Business Oregon was finalized on January 21, 2016. SOAR received its initial funding for this biennium on February 4, 2016 and therefore has spent none of it so far.

SOAR Target Markets



Attachment 1 (From UAF's Successful Proposal to the FAA)

6.1 Proposed Organizational Structure (SIR 9.2.6.1) The University of Alaska (UA) is the Applicant for the Pan-Pacific UAS Test Range Complex (PPUTRC). Within the UA, the Alaska Center For Unmanned Aircraft Systems Integration – Research, Development, Test, & Evaluation, or ACUASI, is preparing the application and will direct operations after selection. It is within the Geophysical Institute, a part of the University of Alaska Fairbanks. The team consists of agencies of the States of Alaska, Hawaii and Oregon, universities, companies, and others who share the common goal of safely and responsibly advancing the integration of UAS into the National Airspace System (NAS).

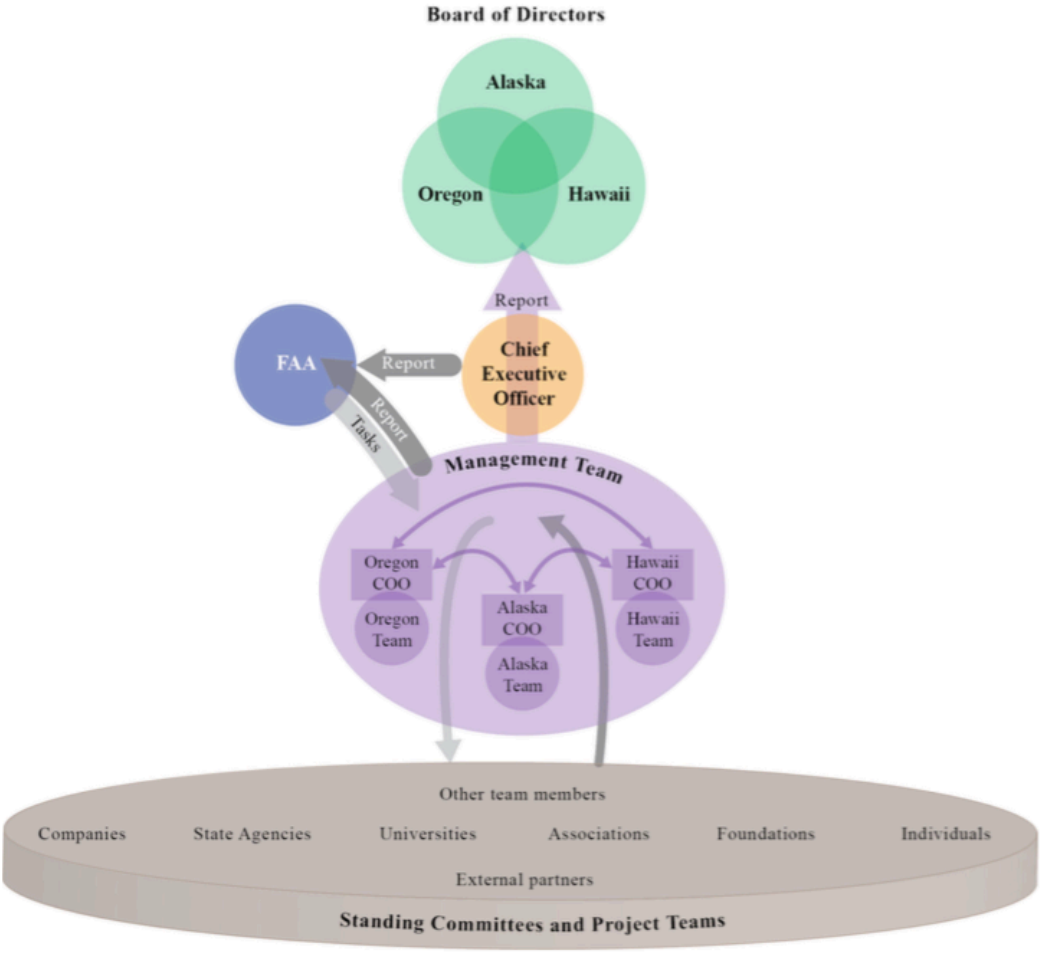


Figure 1. Pan-Pacific UAS Test Range Complex Organization

6.1.1 Board of Directors. The PPUTRC (Fig 1) features a Board of Directors comprised of the ACUASI Executive Director, the Senior Representative from Oregon (the Vice President - Research, Oregon State University), the Senior Representative from Hawaii (Deputy Adjutant General, State of Hawaii), and the Chief Executive Officer of the PPUTRC (ACUASI deputy director). The Board will assure performance of the management team, including the task allocation process, review of performance and reports to the FAA, determination of overall research objectives, approval of new partnerships, approval of test side policies, procedures, risk management and mitigation, both for internal operations and for FAA to consider to be national standards. The Board will meet quarterly, with at least one meeting per year in person.

6.1.2 Management Team. PPUTRC management team is headed by a single Chief Executive Officer (CEO) with a Chief Operating Officer (COO) for each of the three states. For the team members each brought to the overall team, the COOs will provide direction, disseminate policies and standards as they become available, develop marketing programs, foster customer relationships, activate and manage test range operations and provide performance assessment, coordinate with all other test site ranges and members, and collect data and reports for compilation and submission to FAA. Fig 2 shows an actual test range organizational structure that may reside at the range or the COO's location.

Attachment 2 2015 – 2017 Budget Allocation

1. ($1.1MM) Provide Range Labor Funding in support of IFA/SRF funds to FAA-designated test ranges

2. ($671K) Provide Grants to industry and educational players in furthering the establishment of UAS technology and growing a UAS-capable labor pool in the state.

3. ($317K) Marketing activities both within, and external to, Oregon to position the state as the place to be to develop UAS technologies. (Promote ranges, represent Oregon at trade shows and conferences)

4. ($751K) The staff breakdown at SOAR comprises fully burdened salaries for:

    a. An Executive Director responsible for the administrative, organizational and leadership role. Involved with both state and federal legislation involving UAS.
    b. The COO which is an individual with nearly 25 years working with flight operations and interfacing with the FAA and their myriad of regulations. The COO is a position mandated by our agreement with UAF as part of the Pan-Pacific UAS Test Range Complex (PPUTRC) and he provides support to all three of the Oregon test ranges, as well as the emerging Oregon UAS industry.
    c. The Business Development and Marketing Manager whose 20 years of experience in traditional and technology-based media will be responsible for creating the image and brand for Oregon as the place to fly. This role is a resource across all three Ranges.
    d. A business development/marketing support person who also works as an administrative assistant.

5. ($161K) is related to administrative and operations overheads as per the budget in the SOW.

Attachment 3 SOAR/Range MOA Points

SOAR will provide the following services in partnership with the Test Ranges as detailed in the SOAR/Test Range proposed MOA of December 2015:

1. Facilitate Test Range Manager's quarterly meetings with SOAR Executive Committee and other board members.
2. Advocate to PPUTRC on behalf of the Ranges:
    i. Provide operational and tactical relationship between PPUTRC and the Ranges as per SOAR/OSU MOU of March 17, 2015. (OSU is the state's official representative to the PPUTRC).
    ii. Facilitate PPUTRC operational approval of ranges' customer and operational flight test needs.
    iii. Facilitate information exchange to and from other FAA-approved test sites.
    iv. Provide information exchange to and from FAA's Technical Interchange Meetings (TIM), which take place between the FAA, PPUTRC and other FAA-approved test sites.
3. Conduct business development activities in collaboration with the ranges and act as a customer point of contact:
    i. Facilitate prospective customers' introduction and equitable potential customer referrals.
    ii. Provide a customer-focused engagement framework for customers interested in utilizing the test range.
    iii. Develop a customer-centric business process for customer ease of access to the range.
4. Act as a point of contact for State and Federal legislative liaison activities
5. Provide a path of escalation to the PPUTRC Board of Advisors and to State and Federal agencies for issues affecting the ranges
6. Collaborate with the ranges on the development of a comprehensive marketing plan and provide monthly reports back to the ranges on the implementation of the plan.

Attachment 4 Breakdown of Program Expenses

Program Expenses (10.6%)	
- Social Media and Web	**$48,000**
- Marketing & Business Development	**$159,000**
- Travel	**$50,000**
- Event Expenses (AUVSI)	**$50,000**
- Conferences & Tradeshows	**$10,000**

Web and Social Media $48,000

The SOAR website is the most common first point of contact for those interested in the UAS industry in Oregon. The current SOAR site is dated and difficult to modify. We intend to refresh the site to provide a seamless view of the UAS industry in Oregon. Site visitors will be presented with information on Oregon's Test Range Complex, the UAS industry in Oregon, and UAS applications in Oregon.

The Oregon UAS Test Range Complex, with locations at Pendleton, Warm Springs, and Tillamook, is a cornerstone of Oregon's appeal to the UAS industry. The Test Range Complex section will present a unified feel and key information about each range, allowing potential customers to make informed decisions about their testing location. Marketing plans from the three test ranges will be integrated into the overall look and feel of the portal.

The UAS industry section will highlight existing UAS businesses and service providers within the state, as well as describing incentives and motivation for businesses to consider developing or relocating to Oregon. We intend to offer complimentary business listings and links in our resource section. The new website will provide an easy-to-update framework and refreshed visual which furthers SOAR's message that Oregon is a great place to live and work.

SOAR's already-established social media presence will continue to support our core mission of recruiting development to the state in two ways; first, by driving traffic to the Oregon UAS industry web portal, and second, by generating leads through direct interaction with UAS industry players. We will be expanding and leveraging these as our "beacons" in the crowded web world.

The allocated marketing funds will be used for:

- Redesign SOAR website to reflect changing mission of SOAR and Oregon UAS Test Range Complex. Creation and acquisition of key media assets for SOAR website and digital marketing. ($18-$20K)
- Maintenance and support of website as needed.
- Hosting fees, domain fees.

- Pay-per-click advertising (Google AdWords) to drive traffic to SOAR website, including conversion-oriented traffic for Test Range Complex.
- Pay-per-click advertising campaigns (Facebook, Twitter, LinkedIn) to drive traffic to SOAR website, featured content.
- Paid post boosts (Facebook, Twitter) to highlight key SOAR news and events, as well as Test Range Complex news and events.

Marketing & Business Development $159,000

SOAR will initiate an active UAS business development and outreach program. Our goals are to encourage growth of existing Oregon businesses already in, or planning entry into the UAS industry, recruit new UAS opportunities to the state, further the reach of the Oregon UAS industry brand (#SiliconSky), and incentivize/encourage use of the Oregon UAS Test Range Complex. Key components of these programs include:

- Co-branding programs with Oregon UAS industry businesses in support of #SiliconSky brand
- Incentive and/or cost-sharing programs for Test Range Complex use
- Participation in, and support of, Test Range Complex marketing programs
- Creation of assets to support trade shows, events, and face-to-face business development efforts (banners, one-sheets, business cards, etc.)
- Advertising expenses, including event sponsorship and print advertisements in targeted trade publications
- Direct email campaign operating costs
- Business development list creation and/or acquisition
- Support of UAS in STEM, Public Safety and other institutional outreach efforts
- Business development activities (meetings, trips, events, etc.) in direct support of delivering on the SOAR mission for the Test Ranges and development of this industry as a whole.

Travel $50,000

Travel related to Oregon Test Range marketing and operations, trade shows, conferences, events, and business development meetings.

Event Expenses (AUVSI) $50,000

The week-long AUVSI trade show is the largest in the UAS industry. SOAR intends to exhibit at AUVSI as it presents the greatest number of potential impressions and contacts. This is the only national trade show which SOAR plans to attend as an exhibitor. Fixed exhibition booth costs are approximately $15,000; staff travel, food, and lodging are additional. The AUVSI trade show is hosted in New Orleans in 2016; the venue is TBD for 2017. Remaining funds in this category will be devoted to show-specific marketing materials and exhibition booth enhancement. SOAR will participate in conjunction with the Oregon ranges, OSU and Business Oregon.

Other Conferences & Trade Shows $10,000

SOAR plans to have a visible presence at local/regional conferences and trade shows in addition to the AUVSI national show. These events will not only create brand awareness within the Western US UAS industry, but will also demonstrate that SOAR is committed to assisting the development of Oregon's existing UAS community. We have identified some twenty events which may merit SOAR's involvement. These include three regional UAS industry trade shows in San Jose, San Diego, and Las Vegas. Additionally, local events such as two AUVSI Cascade Chapter meetings, OSU-sponsored events, ORAVI events, the WSU Precision Ag Expo, and the Pacific Northwest Natural Resources Field Technology Expo present low-cost opportunities for SOAR to engage the Oregon UAS community and potential users of UAS technology.

Attachment 5 SOAR Detailed Budget per the SOW

$3,000,000

Payroll Expenses

		Position	* Fully-burdened at 2016/17 Annually	15.00% 2015/16 Annually
$95,000	7.28%	Executive Director	$109,250	$109,250
$140,000	10.73%	Chief Operations Officer	$161,000	$161,000
$30,720	2.36%	BizDev Support and Exec Asst	$35,328	$35,328
$61,000	4.68%	Biz Dev and Marketing Lead	$70,150	$70,150
	0.00%	Other	$-	$-
	0.00%	Other	$-	$-
		Total Payroll Expenses	**$375,728**	**$375,728**
	25.05%	**$751,456**		

Administrative Expenses

		Description		
	1.44%	Rent	$21,600	$21,600
	1.20%	Accounting	$18,000	$18,000
	0.80%	Legal	$12,000	$12,000
	0.27%	Phones and Electronics	$4,000	$4,000
	0.17%	Insurance	$2,500	$2,500
	0.33%	Supplies and Materials	$5,000	$5,000
	0.80%	Communications	$12,000	$12,000
	0.37%	Miscellaneous Expense	$5,500	$5,500
		Total Administrative Expenses	**$80,600**	**$80,600**
	5.37%	**$161,200**		

Program Expenses

		Description		
	0.40%	Social Media Support	$6,000	$6,000
	1.20%	Web Support	$18,000	$18,000
	5.30%	Marketing & BizDev	$79,500	$79,500
	1.67%	Travel	$25,000	$25,000
	0.33%	Conferences and Trade Shows	$5,000	$5,000
	1.67%	Event Expenses (AUVSI)	$25,000	$25,000
	0.00%	Other	$-	$-
		Total Program Expenses	**$158,500**	**$158,500**
	10.57%	**$317,000**		

Payroll ==>	25.0%	**$751,456**
Expenses ==>	15.9%	**$478,200**
Ranges ==>	36.7%	**$1,100,000**
Grants ==>	22.3%	**$670,344**

Attachment 6 SOAR Board of Directors

Craig Ladkin, (President)

- Managing Director at Focus Investment Banking
- 25 years of experience managing complex financial transactions between private, public and non-profit sectors in a variety of industries.
- Concentrates on the middle-market mergers and acquisitions and capital raising transactions in the bio-sciences, IT, energy, aerospace and general industry

Ross Hoag, Vice President (Vice Chair)

- Former Director of Engineering, Cloud Cap Technology/UTC Aerospace
- Co-founder of Power4Flight

Collins Hemingway, (Treasurer and Secretary)

- Business & marketing consultant
- Business author and pilot
- Worked for and helped create startup companies,
- Held senior management positions in high-growth companies,
- Was director of international mktg. and business development for Microsoft's fastest-growing division
- Served as interim president for an aviation leasing company.

Nigel Ballard

- Formerly, Director of Federal Marketing, Intel Americas (ret.)
- Managed the budget, originated and oversaw all outbound and partner marketing efforts with the federal government
- Spent twenty years as a Corporate Product Strategist across Europe and the U.S.
- Has worked as a consultant on the development of the first commercially successful PDA
- Worked with Sony Japan on handheld computing devices.

Mark Jones

- Pacific Northwest National Laboratory, Manager Electronics & Measurement Systems Group, National Security Directorate (Tri-Cities, WA)
- Over 20 years of experience in the development of sensors and instrumentations.
- Has led deployment of mobile sensor platforms that have been installed at various installations including U.S. Coast Guard facilities
- Was Principal Investigator for government sponsored programs that led to commercialized products
- Has co-authored over 40 technical papers and has 14 patents.

Annette Kolodzie

- Board President of ONAMI
- A scientist, a business development expert, and a former commercial attorney
- Dr. Kolodzie specializes in developing and executing business growth strategies and technology innovation programs for technology-based companies.

- For almost a decade she served as the Strategic Program Director for FEI Company, creating strategic alliances and building multidisciplinary collaborations with engineers, researchers, companies and government agencies around the world to develop next-generation technology solutions

Roger Lee, Executive Director, Economic Development of Central Oregon

- Executive Director of EDCO for the past 15 years
- Worked in the industry since the early 1990s including both rural and urban areas.

Jessica Metta, Executive Director, Columbia River Gorge Technology Alliance

- Executive Director of the Columbia River Gorge Technology Alliance (GTA);
- Project Manager, Mid-Columbia Economic Development District
- instrumental in the organization's membership doubling, its expansion into new services such as K-12 STEM support and greater recognition of the technology industry's importance in the region.

Cynthia Sagers, Vice President for Research, Oregon State University

- Vice President for Research at OSU.
- Dr. Sagers provides leadership to OSU's vast research enterprise, which last year brought in $285 million in research grants and contracts in areas including agriculture, forestry, marine sciences, public health, and engineering.
- In 2012, Dr. Sagers was named Associate Vice Provost for Research and Economic Development at the University of Arkansas.

Ann Schmierer, Director of Industry Partnering, Advantage Partnerships, Oregon State University

- Director for Industry Partnering at OSU
- Dr. Schmierer matches company interests to faculty expertise, assists with sponsored research contracting, and university trans-disciplinary strategy development.
- Prior to OSU, she was an industry liaison for 12 years at the Georgia Institute of Technology, where she was the Director of Biosciences within the Strategic Partners Office at the Georgia Tech Enterprise Innovation Institute.

Michael B. (Mike) Short

- Vice President and Commercial / Ag Lender at Bank of Eastern Oregon.
- His role includes originating and overseeing commercial and agricultural loans
- He is the President of the Round-Up City Development Corporation, and has served on their executive committee since 2003.

Mitch Swecker

- Director for the Oregon Department of Aviation
- General Aviation Director on the board of the Oregon Airport Management Association
- Served 26 years in the Navy, where he performed as Chief Information Officer for the Navy's aviation community, Aviation Type-Wing Commander (Commodore), Squadron Commanding Officer, senior aviation department head and coordinator for a $40 million major ship overhaul.

Attachment 7 **2013 – 2015 Biennium Results**

1. Provide matching grants to 6 industry-sponsored projects that provide research or testing of commercial UAS applications by June 30, 2015. At least two of the projects will focus on agricultural applications. Industry match will be a minimum of 3:1.

- On track (6 awardees, better than 3:1 match, 1 agriculture specific award)
- As noted in last quarter's report Soar is now focused on Test Range support as key platform.

2. Create/retain 50 jobs in UAS-affiliated industries in Oregon by June 30, 2015.

- Complete
- The FAA's issuance of draft rules on small UAS commercial use were published in the quarter, giving much needed clarity, and allowing industry to "breathe easy" - the draft rules were pragmatic and much less onerous than some were expecting. The regulator has also speeded the pace at which it has issued to industry limited permissions to fly - in the last 9 months more than 1000 Part 333 exemptions have been issued allowing the first businesses to start flying drones commercially, albeit in a limited fashion. 18 of these have been issued to businesses in Oregon. Financial investment continues to flow into the industry nationally, both strategic (industry), and private. Hiring has followed these positive trends. For example, In Oregon two UAS start ups added more than 40 jobs (Skyward and Honeycomb) in the last 9 months (as of end of Q1). Other early stage companies including Paradigm continued to hire.

3. Leverage $1.3 million in federal or private funds (i.e., non-state funds) to support UAS development in Oregon by June 30, 2015.

- Complete
- NW UAV alone has spent more than $1.5 million on its project. The Pendleton test range has spent in excess of $200,000 and the Confederated Tribes of Warm Springs recently committed $200,000. Soar's funds have been leveraged by in excess of $2 million dollars, with committed dollars still flowing in.

4. Establish 2 additional public organizations capable of sponsoring UAS test flights for a total of 3 in Oregon by June 30, 2015.

- Complete
- The goal of this metric is to dramatically increase the number of legal UAV flights made in Oregon. The crucial critical success factor for being able to increase the

number of flights in Oregon is funding for Soar for the next biennium. With these proposed funds, Soar will be able to complete the final operationalization of the ranges, and move from ad hoc industry outreach to systematic programs putting industry into the air. Ahead of this "start", Soar continues to systematically address issues with the UAF bureaucracy (University of Alaska Fairbanks, which takes the liability responsibility for test site flights). This work has become more active and more productive with the hire by Soar of John Stevens as the Chief Operations Officer for the Oregon ranges, and the appointment by UAF of a dedicated resource (Brian Prange) to focus on start up issues. Business Oregon also designated a specific resource to assist Soar in its work (Mitchell Gee). A Pan Pacific Test Range Board of Advisors has also been constructed, with the Interim VIce President of Research at OSU (Dr. Ron Adams) being the Oregon designate. Soar COO John Stevens is also strengthening ties within the national test range group (which met recently in Reno, NV), and with the FAA. On this latter score, Soar also met with the head of the UAS integration office (Jim Williams) in January to discuss a variety of test range issues. In March Governor Kate Brown and Business Oregon announced a package of infrastructure support for the Pendleton test range. The Oregon ranges are now starting to be well positioned for a fast start for the next biennium. This start will be contingent on successful passage of an Oregon budget containing support for Soar operating funds. Note, these funds provide the ability to operate the ranges. Infrastructure funding per se does not allow this to happen.

5. Complete Initial Operating Capability (IOC) flights at all three UAS test ranges by Sep 30, 2015

- Complete

- The goal of this metric is to establish the initial operating capability (IOC) at each Oregon test range. IOC is defined as a successful completion of a UAS mission under a PPUTRC Certificate of Waiver or Authorization (COA). We have achieved this success factor although not completely through the PPUTRC. Due to the difficult procedural aspects of working through UAF, our flight(s) at Tillamook have been taking place, just not under the PPUTRC umbrella. The range operator there has told us that his flights have been using a commercial avenue rather than the Public Aircraft avenue.

6. Monitor each Test Ranges' Certificates of Waiver or Authorization (COAs) activity. Goal is for each Range to safely complete a UAS operation under a PPUTRC COA prior to September 30, 2015.

- On Track. Approved COAs are increasing at Pendleton and Warm Springs. Tillamook is proposing an alternative that they have been using. We continue to monitor this…

- The goal of this metric is to provide a leading indicator of future flight activity at each Oregon Test Range. COAs are the FAA's authorization to operate UAS at the Test Ranges, issued to the Ranges through the PPUTRC. They are very complex authorizations, requiring extensive analysis and review by the Ranges, the PPUTRC, and the FAA prior to approval. The COA approval process can often take over 120 days, even with intense monitoring and feedback from the Ranges and the PPUTRC during the process. To date, the Oregon ranges have achieved the following COA activity: Pendleton Range: 4-Approved, 6-In FAA Review, Warm Springs Range: 5-Approved, 4-In Draft, Tillamook Range: 0 Approved, 0 in Process