

Oregon Unmanned Systems Business Enterprise (OR-UAS)

Request for Proposals

January 20, 2014

Oregon Unmanned Aerial Systems Business Enterprise (OR-UAS), a 501(c)(6) nonprofit established to help make Oregon a leader in civilian UAS development, is soliciting grant proposals for projects that will create UAS-related jobs or generate other UAS-related long-term economic activity in the State.

Responses are due Friday, February 28, 2014.

"UAS" is defined in the broadest possible sense to include all related or supporting technologies and all applications built upon unmanned aerial technologies.

"Oregon companies" include those in the Columbia Gorge or elsewhere whose operations cross state boundaries. Because grants come from state tax funds, the proposal must clearly document the benefit to Oregon.

Desired outcomes of this and future Requests for Proposals (RFP) include:

- Expanding existing Oregon companies that support UAS technology.
- Assisting Oregon companies in winning new contracts and grants that advance UAS applications.
- Recruiting UAS firms to do testing of new vehicles, sensors, systems, and applications in the state.
- Recruiting UAS firms to establish offices and facilities in the state and to initiate projects here.
- Generating UAS industry-leading applications that promote innovation.

Guidelines

- Priority will be given to those projects that have greatest benefit to overall economic development in the state.
- Investments will be directed to incentivize and leverage spending by private enterprise and public entities.
- Investments will be directed to those projects that have the greatest feasibility, cost-effectiveness, urgency, and impact.
- Investments will be directed to those projects that are unique in concept or unique to Oregon, that are novel in terms of technology or application, or that create a technological or market differentiator for the state.

- Preference will be given to projects that help the State put into successful operation any or all of the three Oregon UAV test ranges that were included as part of the recent FAA Test Site designation. Oregon is in a Pan-Pacific partnership led by Alaska, with ranges located at Pendleton, Tillamook, and Warm Springs.
 - See <http://www.faa.gov/news/updates/?newsId=75399> for details.

Decisions and Awards

- It is envisioned that grants will range from \$25,000 to \$75,000. We may provide grants as small as \$10,000.
- Larger grants will be considered if they obtain proportionately greater results, such as establishing a long-term R&D project in the state, a major presence of a UAS developer/manufacturer in the state, or a similar high-value economic development opportunity.
- Private-public cost share should be 3:1 private-to-public for operational activities.
- Private-public cost share should be 5:1 private-to-public for capital investments and infrastructure. Preference will be given to proposals that involve flight activities, R&D, or other business activities, as opposed to requests for capital investments in the hope that some business activity will occur in the future.
- Proposals below these ratios will be considered if the projects can demonstrate **significant, direct** economic benefit.
- “Leverage” will be evaluated according to the size and nature of other contributions, the number of jobs or other economic activity to be created, the partnerships involved, and so on. Funds that are likely to be spent in Oregon outside of this RFP represent lower leverage than “new” investments.
- Projects with short-term benefits will be considered if they generate significant, direct economic activity; e.g., a large number of test flights or other significant R&D projects that directly benefit Oregon companies in the short term.
- Decisions will be based on the following criteria:
 - The additional funding that will be leveraged by OR-UAS funding.
 - The job creation potential of the project.
 - The project’s contribution to the growth of Oregon’s overall UAS industry.
 - The project’s likelihood of success.
 - The timeliness of expected results.
 - The project’s contribution to successful operation at any or all of the three Oregon UAV test ranges that were included as part of the FAA Test Site designation.
 - Synergy with other Oregon-produced unmanned systems.
- All funding decisions are ultimately at the discretion of the OR-UAS board of directors.

Grant Categories

The goal of this RFP is to solicit as many UAS-related projects in as broad a fashion as possible. All submissions will be considered. The areas of greatest interest to OR-UAS are:

Precision agriculture. Development and implementation of commercial applications, wherein UAS will be used for evaluating field conditions, crop health, disease, and resource applications (e.g. water, fertilizer, pesticides, herbicides). Preference will be given to applications of specific value to Oregon farmers and crops.

Industry development and recruitment. Projects that will lead to significant expansion of existing UAS businesses in the State or that bring outside manufacturers, prime contractors, or other businesses to Oregon to develop new UAS or UAS-related systems, creating new long-investment.

Development of new or improved UAS systems. This includes propulsion, fuel management, alternative power systems, sensors, improvement in flight times, and applications, in which the focus is on novel/unique technologies and solutions that result in industry growth.

Fire/emergency response. This includes early fire detection, forest and rangeland firefighting, urban firefighting, search and rescue, and any other uses by first responders. Preference will be given to projects that have the greatest potential for saving lives and property and reducing costs.

Natural resources management. Applications that will help Oregon become a national leader in the use of UAS in forest, range, and wildlife applications, that will improve the science results achieved by Oregon researchers, and that have the greatest potential to reduce costs.

All other commercial applications. UAS are being used in more than one hundred different applications. OR-UAS is seeking innovative uses of particular value to Oregon.

Local portion of matching grants. Provide some or all of the local matching portion of UAS grants from other agencies that are being sought by Oregon businesses, universities, research centers, and agencies.

Grant-writing assistance. Help Oregon businesses, universities, research centers, and agencies develop grant proposals for funding from other government entities or private foundations or to obtain government contracts. Typical of such grants are the Small Business Innovation Research/Small Business Technology Transfer grants. Assistance will include 1:1 matching funds for proposal writing, review, or development assistance;

we will pay up to \$3,000 in grant-writing assistance for each grant.

Submission Details and Deadline

Submissions should clearly and comprehensively describe the project and the expected business value that will be returned to the State. Please include all information you think will be useful in evaluating your proposal, while being as brief as possible. The quality of information is more important than the length of the submission. We will do everything possible to keep all information related to a submission confidential, but do not include any proprietary business or technical information. Characterize a project without revealing competitive information.

Submission should be a single electronic file (preferably PDF) as an email attachment, in standard letter size with one-inch or greater margins; single-spaced in 12-point font. Proposal should include the name of the submitter and point of contact, with telephone number, email address, and other relevant contact information.

RFPs must be submitted electronically to: Mark Morrisson, executive director, OR-UAS, at mmorrissonUAS@gmail.com, no later than midnight Pacific Time, Friday, February 28, 2014. Late submissions will not be considered for this RFP.

Other:

- OR-UAS retains the discretion to approve or deny applications.
- All awards are subject to approval by OR-UAS's board of directors.
- The payment schedule for awards will be subject to the completion of reasonable milestones.
- If the proposal includes funding from other sources, then reasonable proof of the other funding will be required.
- OR-UAS will not share information about a proposal with competing proposers or the public.
- The award will expire within twelve months if the work has not been completed, unless the award has been explicitly extended in writing by OR-UAS.
- A synopsis of awards and associated funding will be issued.
- This RFP is not a commitment by OR-UAS to fund projects. Funds for this round may be rolled forward to a future RFP if there are insufficient projects selected.

Questions

If you have any questions, email mmorrissonUAS@gmail.com no later than February 5, 2014. We will respond to all questions to the individual, and publicly, no later than February 9, 2014, via the same channels used to broadcast the original RFP.

It is not expected that answers to questions will change the submission date; everyone should plan accordingly.

Oregon UAS Business Enterprise Implementation Strategy

Objectives

Use state and other funding to create long-term business growth in Oregon, through the creation of new jobs and expanded economic activity. Establish Oregon as a leader in civilian UAS uses, with an emphasis on agriculture and other applications that directly benefit the state and region. Desired outcomes include:

- Expanding existing Oregon companies.
- Assisting Oregon companies in winning new contracts and grants.
- Recruiting UAS firms to do testing of new vehicles, sensors, systems, and applications in the state.
- Recruiting UAS firms to establish offices and facilities in the state and to initiate projects here.
- Generating industry-leading applications in new areas.

Guiding Principles

- Priority will be given to those projects that have greatest benefit to overall economic development in the state.
- Investments will be directed to incentivize and leverage spending by private enterprise and other public entities.
- Investments will be directed to those projects that have the greatest feasibility, cost-effectiveness, urgency, and impact.
- Investments will be directed to those projects that are unique in concept or unique to Oregon, that are novel in terms of technology or application, or that create a technological or market differentiator for the state.
- Investments will be made through an open, competitive process.

Operating principles

- OR-UAS will remain as lean as possible, with work being contracted to private entities whenever feasible.
- Decisions for projects will be made with mechanisms that engage major stakeholders.
- OR-UAS will regularly solicit competitive Requests for Proposals for potential projects, with widespread notice to the industry and other stakeholders.
- Private-public cost share is anticipated to be 3:1 private-to-public for operations and 5:1 ratio for capital investments and infrastructure.

- RFPs will be screened by an outside Advisory Committee and evaluated for technical feasibility, job creation potential, and the leverage of other funds.
- The board will review all recommended proposals and make a final decision according to the following criteria:
 - The additional funding that will be leveraged by OR-UAS funding.
 - The job creation potential of the project.
 - The project's contribution to the growth of Oregon's overall UAS industry.
 - The project's likelihood of success.
 - The timeliness of the project yielding results.
- All funding decisions are ultimately at the discretion of the board.

Plan of Action and Milestones:

- 1. Direct Grants: UAS projects leading to private investment, partnerships, and commercial applications.**

Performance Measurement:

- 1-3 agriculture projects funded in 2014 (\$80,000); requirement by the state.
- 1-3 agriculture projected funded in 2015 (\$85,000); requirement by the state.
- 2-4 other projects funded in 2014 (\$70,000);
- 2-4 other projects funded in 2015 (\$115,000).

- 2. Grant Assistance Program.**

Help Oregon firms, universities, research centers, and state agencies obtain grants from other government entities or private foundations, and to obtain other government contracts. Potential grant sources include federal agencies (e.g. FAA, US Forest Service, NOAA, NASA), state agencies (Department of Forestry, Agriculture, Fish & Wildlife, Aviation), trade associations (UAS, agriculture, forestry, search & rescue), and others. Typical of such grants are the Small Business Innovation Research/Small Business Technology Transfer grants.

Grant assistance will be considered on a first-come, first-served basis.

Performance Measurement:

- Grant-writing assistance for 5 to 8 grants in 2014 (\$15,000).
- Grant-writing assistance for 5 to 8 grants in 2015 (\$15,000).

Provide for grant-writing assistance, including assistance in evaluating the applicability of a given grant program, development of and referrals to a network of grant-writing professionals,

and 1:1 matching funds for proposal writing, review, or development assistance (up to a maximum of \$3,000 for each grant).

3. Infrastructure/Establishment of General-Purpose UAS Test Capabilities.

Provide sufficient support for the development of infrastructure so that the state develops the capability for testing a variety of equipment and applications under a range of geographic and weather conditions and is competitive with regard to infrastructure.

Performance measurement: Provide critical or specialized infrastructure for one or more ranges to ensure that the state has competitive test ranges, Provide investment based on at least a 5:1 ratio (range vs. grant money) and according to where the state will receive the greatest return for its money.

- 2-4 projects to be funded in 2014, totaling \$50,000. Funding to be completed by the end of 2014.
- An applicant is more likely to receive funding for infrastructure if the proposal involves direct flight activities or other R&D activities, as opposed to requests for infrastructure funding in the hope that some business activity will occur in the future.

2014 Timeline Per Annual Schedules Above

2014	RFP Issued	RFP Returned	Grant Awarded	
Project Grants	ASAP	45 days	Early Q3	
Grant Writing	Q2	Ongoing	Ongoing	First-come, first-served basis till funded expended
Grant Matches	Q2	Ongoing	Ongoing	First-come, first-served basis till funded expended
Infrastructure	Q3	Q3	Q4	Sooner if included in other grants

2015 Timeline Per Annual Schedules Above

2015	RFP Issued	RFP Returned	Grant Awarded	
Project Grants	Q1	Q1	Q2	
Grant Writing	Q2	Ongoing	Ongoing	First-come, first-served basis till funded expended
Grant Matches	Q1	Ongoing	Ongoing	First-come, first-served basis till funded expended
Infrastructure	Q1	Q2	Q3	As needed, as funds available

Appendix A: Grant Considerations

- One-third of OR-UAS projects will relate to agriculture—a state requirement.
 - OR-UAS needs to expedite the grant process for agriculture in order to have UAS applications flying during the 2014 growing season.
- Slightly more than one-third of the funding will be available for other project grants.
- Approximately 20 percent of the funds will support grant-writing and provide matching funds for grant applicants seeking funding from other sources.
- Approximately 10 to 15 percent of the funds, \$50,000 to \$75,000 total—most of which will be spent the first year in order to have it in place—will relate to infrastructure.

It is envisioned that grants will range from \$25,000 to \$75,000. OR-UAS may decide to have some number of smaller, high-visibility projects, which would increase the number of projects but not the total investment.

Larger grants will be considered if they obtain significantly greater results, such as establishing a long-term R&D project in the state, a major presence of a UAS developer/manufacturer in the state, or a similar high-value job opportunity.

Projects with shorter-term benefits will be considered if they generate significant direct economic activity; e.g., a large number of test flights or other significant R&D projects that occur in Oregon or directly benefit Oregon companies in the short term.

Grants will likely be given in the following areas:

- 1-2 major projects for precision agriculture each year. Development and implementation of commercial applications, wherein UAS will be used for evaluating field conditions, crop health, disease, and resource applications (e.g. water, fertilizer, herbicides). Oregon growers can benefit from technology and know-how developed uniquely for Oregon crops.
- Recruitment of a major manufacturer/prime contractor to Oregon to develop new UAS or UAS-related systems, with the goal of locating a company division/group in Oregon and creating a long-term partnership leading to at least 2 additional projects in FY2014-15 timeframe and additional work in 2016 and beyond.
- Development of new UAS systems, propulsion, fuel management, alternative power systems, sensors, and applications, in which the focus is on novel/unique technologies and applications.
- Forest and rangeland firefighting and general natural resources management. Projects that will benefit directly Oregon fire managers and forest/range researchers and managers, with potential opportunity for commercial export outside of Oregon.
- Other commercial applications, regardless of category.

Unmanned Aircraft Systems Enterprise Board of Directors

Candidates italicized have not agree to serve as yet, or, have not yet been approached.

Chairperson

Rick Spinrad, Vice President – Research, Oregon State University

Rick is a Technical Advisor with the Oregon Innovation Council. He will provide valuable insight into OR InC and State rules and expectations for OR InC projects/awardees. Rick has direct interface with the OSU College of Engineering, and manages research initiatives inclusive of UAV sensor and robotic applications, research and advocacy.

Rick Spinrad became Vice President for Research at OSU in July of 2010. Prior to this role, he served as Assistant Administrator for research for the National Oceanic and Atmospheric Administration. As NOAA's Assistant Administrator for research, Spinrad directed the agency's programs in oceanography, atmospheric science and climate since 2005. He directly supervised several of NOAA's high-profile research efforts, including ocean exploration, the National Sea Grant College Program and the Climate Program Office, as well as seven NOAA laboratories around the United States.

Among his accomplishments, Spinrad led the White House Committee that developed the nation's first set of ocean research priorities and oversaw the revamping of NOAA's research enterprise. In addition to his NOAA stint, Spinrad has served as a research director with the U.S. Navy, taught at two universities, directed a major national non-profit organization, presided over a private company and worked as a research scientist. Spinrad is the recipient of Presidential Rank Awards from Presidents George W. Bush and Barack H. Obama. Dr. Spinrad is also an OSU alumnus, receiving his master's degree in 1978 and doctorate in 1982 in oceanography.

The vice president for research oversees research and scholarship activities spanning OSU's 11 academic colleges and more than 20 multidisciplinary programs, centers and institutes.

Contact: (541) 737-0664, rick.spinrad@oregonstate.edu

Board Membership

I. General Business, Industry and Academia

(a) Roger Lee, Executive Director, Economic Development of Central Oregon

Roger has been the Executive Director of EDCO since September 1999. He has 18 years of economic development experience, working in business development for the Seattle/King County Economic Development Council and economic and community development for Baker City/County in Northeast Oregon. Roger is a graduate of University of Washington in International Economics. His industry experience includes employment at Hewlett-Packard Co., and Idaho's largest electric utility, Idaho Power.

Networked throughout the Pacific Northwest with colleagues in the field, he has served as the president of the Oregon Economic Development Association, board member of the Pacific Northwest Economic Development Council, is a current board member of the Oregon Manufacturing Extension Partnership (OMEP) and is involved in several committees at the state level in charting the future of economic and community development for Oregon. Locally, he serves on advisory boards for Opportunity Knocks, Entrepreneur's Foundation, and Central Oregon Resources for Independent Living.

At EDCO, Roger is responsible for the tri-county area's economic development strategy, business recruitment, oversight of the organization and its satellite offices, and development of special projects including industrial parks, expansion of commercial air service and creation of new programs to assist the region's traded-sector employers and improve the overall business climate.

Contact: (541) 388-3236, roger@edcoinfo.com

(b) Clark Seavert, Director, NW Agribusiness Executive Seminar, Oregon State University

Clark is a professor in the Department of Agricultural and Resource Economics at Oregon State University. He attended the College of Southern Idaho, Oregon State University at Eastern Oregon University, and University of Idaho. Clark began his career with Oregon State University in January 1989 as an Area Extension Farm Management Agent in the Mid-Columbia region of Oregon. He has held two administrative appointments as Superintendent and Staff Chair at research and Extension centers in Hood River and Aurora. He served as director of the

Experience and 2009 from the Agricultural Applied Economics Association, the Extension/Outreach Program for an Individual with Ten or More Years of Outstanding Extension Program Award in 1998 from the Western Agricultural Economics Association, and Professor of the Year in the College of Agricultural Sciences in 2012.

Clark's research focuses on the economic and financial assessment of technology investment strategies with the aim of strengthening sustainable business models in agriculture. His areas of interest are technology assessment and advancement, business model innovations and strategies, supply chain management and value chain analysis.

Contact: (541) 737-1422, clark.seavert@oregonstate.edu

(c) **CPA** – in negotiation

(d) **Attorney** – in negotiation

(e) **Mark Jones**, Pacific Northwest National Laboratory, Manager Electronics & Measurement Systems Group, National Security Directorate (Tri-Cities, WA)

Mark Jones has over 20 years of experience in the development of sensors and instrumentations. He has recently installed a testbed facility that uses commercially available radar, cameras, and RF receivers to characterize signatures of small boats in a variety of weather conditions. He has also led deployment of mobile sensor platforms that have been installed at various installations including U.S. Coast Guard facilities. Mr. Jones has led numerous programs involving unmanned vehicles in the maritime environment for environmental, energy and national security market sectors. These efforts include activities such as eelgrass/ecosystem assessments to developing payloads for water sampling, trace detection, data handling, and secure efficient exfiltration of large data streams off deployed payloads. Previously, Mr. Jones worked at Litton Guidance and Control Systems focusing on acoustics where he designed and developed optical fiber hydrophones for towed and planar applications related to anti-submarine warfare. In this capacity, he developed telemetry for high-channel count units and integrated original de/multiplexing schemes for various applications. Mr. Jones was Principal Investigator for government sponsored programs that led to commercialized products. He has co-authored over 40 technical papers and has 14 patents. He is a member of Optical Society of America, AUVSI, and Acoustical Society of America.

Contact: 360.582.2527, mark.jones@pnnl.gov

(f) Craig Ladkin, Managing Director, Focus Investment Banking

Craig Ladkin has twenty-five years of experience managing complex financial transactions between private, public and non-profit sectors in a variety of industries and international jurisdictions. He has advised on transactions from the very large; for clients such as the World Bank, IFC, the Treasury Departments of more than a dozen OECD nations, along with their state-owned and power and utility companies, down to the very small; angel level investments, small city urban renewal projects and private schools campus development.

Mr. Ladkin has advised and managed transactions for the Treasuries of Sweden, Norway, Finland, France, EDF, Statoil, Hydro-Quebec, BC Hydro, Ontario Hydro and many multi-national corporations and financial institutions. At FOCUS Investment Banking, Mr. Ladkin concentrates on middle-market mergers and acquisitions and capital raising transactions in the bio-sciences, IT, energy, aerospace and general industry. The focal point is to work with transactional opportunities in the \$10 million to \$150 million range.

Mr. Ladkin holds an MBA in International Finance and Marketing from the London Business School in London, England and a B.Sc. in Geotechnical and Petroleum Engineering from the University of British Columbia.

Contact: 541 390-5005, craig.ladkin@focusbankers.com

(g) Marshall Crew, President, Agere Pharmaceuticals (Bend, OR)

Marshall is president of Agere Pharmaceuticals. Marshall has over 16 years of experience improving oral bioavailability with solubilization technologies, and has sensor technology experience that applies to UAS.

Marshall has spent his career developing technologies for the delivery of poorly soluble drugs, and then managing their application to achieve client success. He has over 28 patents and patent applications. His scientific expertise includes formulation design and development, solid state characterization of drug substance and product, and computational modeling (predicting shelf-life and pharmacokinetic and bioavailability for oral, devices and parenteral delivery).

Marshall holds a PhD in Physical Chemistry from Oregon State University, and is a member of Agere's Board of Directors.

Contact: (541) 318-7115, Crew@agerepharma.com

(h) Charlie Jones, Dean of Engineering, Technology and Management, Oregon Institute of Technology (Klamath Falls, OR)

Resume forthcoming ...

Contact: (541) 885-1377, Charlie.Jones@oit.edu

(i) Collins Hemingway, business & marketing consultant, business author, pilot.

Collins has worked for and helped create startup companies, held senior management positions in high-growth companies, was director for international marketing and business development for Microsoft's fastest-growing division, and served as interim president for an aviation leasing company. He wrote the initial strategic vision document for civilian UAS applications for Oregon, co-authored the business plan based on that vision as well as the application for the Oregon InC award, and led the creation of Oregon's Economic Impact Assessment for the FAA Test Site application. (Bend, OR.)

Contact: (541) 419-9668, collinshemingway@hotmail.com

(j) Nigel Ballard, Director of Federal Marketing, Intel Americas

Nigel manages the budget, originates and oversees all outbound and partner marketing efforts with the federal government. He works closely with the Executive office of The President, State Department and local Congressional leaders.

He is a member of the Board of Advisors of FedScoop, and is Chairman of their Federal Marketing Executive Board. FedScoop is a Government IT media company that gathers top leaders from The White House, federal agencies, academia and the technology industry to find ways technology can improve government.

He was awarded the Homeland Defense top award for his wireless technology and leadership during the Katrina disaster. When the 2010 Haiti earthquake struck he was asked by The White House to assist in the relief and recovery effort. He is also a Fed 100 winner.

Prior to joining Intel, Nigel spent twenty years as a Corporate Product Strategist across Europe and the U.S. Nigel has worked as a consultant on the development of the first commercially successful PDA then worked with Sony Japan on handheld computing devices. Before moving to the USA in 2000, he managed Bluetooth globally for Cap Gemini out of France.

Nigel represents Intel as a member of UAVSI and has a strong personal interest in autonomous robotics. His career passions include business strategy, breakthrough marketing and mobility.

Contact: (503) 329-7163, Nigel.S.Ballard@intel.com.

(k) Jessica Metta, Executive Director, Columbia River Gorge Technology Alliance; Project Manager, Mid-Oregon Economic Development District

Jessica Metta has been the Executive Director of the Columbia River Gorge Technology Alliance (GTA) since 2008. The GTA is a professional organization that supports, connects and develops the high tech businesses in the bi-state Columbia River Gorge, with focus going to the UAS subsector which comprises about half of the roughly 2500 employees represented by the GTA. Since joining the GTA, Jessica has been 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. As an employee with Mid-Columbia Economic Development District, Jessica brings connections to and support from other industries and economic development efforts in the region. Prior experience is with regional land use planning under the Columbia River Gorge Commission.

Contact: (541) 296-2266, jessica@mcedd.org

(l) Ross Hoag, Retired. Was Director of Engineering, Cloud Cap Technology/UTC Aerospace.

Resume forthcoming.

Contact: (503) 399-3176, rosshoag@gmail.com

II. Professional Political Representation

(a) Oregon Representatives - in negotiation

Contact:

(b) Mayor Philip Houk, (Pendleton, OR)

Philip earned a MBA/MPA from City University of Seattle, and a BS in Criminal Justice at Eastern Oregon University. He is a risk management manager for the Union Pacific Railroad Company, and past president of the Pendleton City Council, Chamber of Commerce and Blue Mountain Community College Board of Directors.

Mayor Houk has been mayor of Pendleton for 7 years, has served on the City Council for 18 years prior, and has 28 years of public service on a variety of local committees, including the city's budget and water committees, capital investment committee and the urban renewal board.

Statewide, Mayor Houk has served as President of the League of Oregon Cities' Board of Directors, and President of the board of directors for the Oregon Mayors Association. He has been a member of the Special Courts Advisory Board to the Oregon Supreme Court Chief Justice. Mayor Houk is a tireless supporter of the UAS industry, and is working to grow the industry in Eastern Oregon.

Contact: (541) 564-3638, pwhouk@yo.com.

III. Oregon State Aviation Industry

(a) Mitch Swecker, Director, Oregon Department of Aviation (Salem, OR)

Mitch Swecker is the Director for the Oregon Department of Aviation. He was the Oregon State Airports Manager prior, and in that capacity, he oversaw the state's 28 airports and 300 leases and agreements. He is on the board of the Oregon Airport Management Association as General Aviation Director.

Mitch 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. As a wing commander, he also served as

part of the "Naval Aviation Enterprise", the Navy's best business practices endeavor including LEAN manufacturing principles to recapitalize the fleet's aircraft inventory.

He has experience managing large budgets and staffs. Mitch has held a variety of aviation jobs, including operations, scheduling, maintenance management and quality assurance. He was trained in Operational Risk Management (ORM), the military counterpart to the FAA's Safety Management System (SMS) program. Mitch is a pilot with over 3800 hours in a variety of rotary and fixed-wing aircraft. He has been a flight instructor in both helicopter (H-46D, UH-1N) and fixed wing (T-34B) aircraft. He is a veteran of both conflicts in Iraq as well as Somalia operations.

He has a Bachelors degree in Criminal Justice from Old Dominion University in Norfolk, Virginia and a Masters degree in Public Administration from Auburn University.

Contact: (503) 378-2340, Mitch.T.Swecker@aviation.state.or.us

Press Contacts:

Roger Lee, 541-388-3236, roger@edcoinfo.com

Mark Morrisson, 541-639-6139, mmorrissonUAS@gmail.com

Organization Launches to Grow Business for Aerial Vehicles

Executive Director Hired; Goal Is to Drive Job Creation in Oregon

BEND (OR) — January 28, 2014—A new nonprofit, the Oregon Unmanned Systems Business Enterprise (OR-UAS), has hired Mark Morrisson as Executive Director and has formally begun operations designed to help establish Oregon as a leader in the civilian uses of Unmanned Aerial Systems (UAS), often referred to as “drones.”

Morrisson, whose academic background involves biology and sensors and whose business background spans technology-intensive industries, begins work this week. A longtime Oregon resident, Morrisson has held senior management positions in the U.S., Europe, and Australia. He has worked in biotech and venture capital internationally and has been involved in the venture capital community in Bend.

OR-UAS has the statewide mission of creating jobs and economic growth for UAS-related applications in fields as diverse as agriculture, firefighting, natural resource management, search and rescue and other emergency responses, infrastructure security, real estate, surveying, and photography and film.

“In addition to the aviation component of UAS, there is real intellectual property value in the sensor technology and the data analysis that spins off from it,” said Rick Spinrad, vice president for research at Oregon State University and board president of OR-UAS. “We are fortunate to have in Mark an individual who comes from the sensor world, who has managed many complicated programs, and who has helped to launch a number of startup companies.”

Oregon Funding

OR-UAS’s initial funding comes from a two-year, \$882,000 state grant from the Oregon Business Development Dept. and the Oregon Innovation Council, which was approved by the 2013 Legislature. OR-UAS seeks to match state funding with private investments, grants, and other programs to get innovative projects off the ground.

Using seed money provided by this grant, OR-UAS seeks to:

- Expand existing Oregon companies that support UAS technology.
- Assist Oregon companies in winning new contracts and grants.
- Recruit UAS firms to test vehicles, sensors, systems, and applications in the state and to establish offices and facilities here.
- Generate industry-leading applications that promote innovation.

Agriculture, Firefighting Among Critical Applications

Of the many potential uses of UAS, the most immediate growth area is likely to be agriculture, which is expected to be the focus of as much as 85 percent of the spending on this technology in the next few years. Agriculture represents the largest use of UAS in the world, and in these applications the U.S. trails many other nations.

Early studies show that UAVs can add between eight and ten percent to the bottom line of farmers by reducing costs and improving yields. Oregon's many specialty crops give the state an opportunity to lead the nation in a variety of agricultural applications.

Firefighting is another important area. UAS can save lives and reduce firefighting costs by millions of dollars through the ability to locate hot spots before they explode into full-fledged fires and to protect fire crews with real-time communications and imaging during actual fires. Their deployment requires the development of the right operational and safety procedures and the engagement of the many agencies that have forest and rangeland responsibilities.

"Many of these uses are on the cusp of commercial viability and represent great growth opportunities for companies in the state," Morrisson said. "The technologies exist and the needs exist. What we require are specific projects that prove the cost-benefit advantages of UAS, that develop the proper processes for the particular use, and that demonstrate the flight safety required by the FAA."

Support for Test Ranges Also Planned

A secondary mission for OR-UAS is the support of the three test ranges in the state that were recently approved by the Federal Aviation Administration (FAA). Oregon is part of the Pan-Pacific partnership with Alaska and Hawaii, one of only six UAS test sites that were selected in the country. The designation does not come with any federal funding.

Oregon's three test ranges—at Pendleton, Tillamook, and Warm Springs near Madras—cover a variety of geography and climate. The test sites will be used to develop the technology and procedures necessary for the safety levels required for the eventual flight of UAS across American airspace.

"Oregon has a once-in-a-lifetime opportunity to be on the leading edge of a new industry," Morrisson said. "Growth of civilian applications is dependent on these new ranges, and Oregon is one of the few states to have them. By assisting the ranges in ways that will benefit them all, we will be better able to achieve our overall business development goals."

The formation of OR-UAS and Morrisson's hiring is the culmination of a four-year effort initiated and nurtured by Economic Development of Central Oregon (EDCO), then broadened into a statewide coalition that included leadership by Oregon State and the Cascade chapter of the industry trade association, the Association of Unmanned Vehicles Systems International (AUVSI), as well as other private and public entities. The coalition's efforts led to the award of the state grant and the state's winning Test Site partnership with Alaska and Hawaii.

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Editors, note: The spelling of "Morrisson" with two s's is correct.