



Directed Investment Overview and Opportunities

For discussion by Grant Development & Oversight Committee July 28, 2016

Direct Funding Overview

- Grants Committee shall vet ideas to bring to the full council
- Funds available: \$1,806,927
- A mix of infrastructure and bold investments that make a real difference to talent needs
- Seek to invest in models that work, helping them to scale or expand reach, and developing the model or template that can be implemented by other organizations

Background – Talent Council Investments in Round 1 and 2

The Council has invested nearly \$3.4 million in nine projects that address known talent gaps in 8 of the 10 priority occupational clusters identified by the Talent Plan.

Round 1 Grant Awards – April 2016 – \$2,000,000

Recipient	Award	Project Title	Industry and (Occupational Cluster*)
Mount Hood Community College	\$453,129	Advanced Manufacturing Certification Center	Advanced Manufacturing (5)
OHSU	\$672,403	Industry Relevant Training and Research Experiences for Biomedical Engineering and Data Science Students	Bioscience (1,2,7)
OIT/Oregon Tech	\$340,783	Cybersecurity Workforce Development	Information Technology (9)
Oregon State University	\$533,686	Pacific NW Electrical System Resiliency/Disaster Preparedness Training	Energy (7)

Round 2 Grant Awards – July 2016 – \$1,395,984

Recipient	Award	Project Title	Industry and (Occupational Cluster*)
Linn-Benton Community College	\$50,000	Linn-Benton Surgical Technology Statewide Program	Healthcare (8)
OIT/Oregon Tech	\$182,177	Supervised Practicum in ABA: Building Oregon's Autism Behavioral Health Workforce through University/Industry Partnerships	Healthcare (6)
Oregon Manufacturing Extension Partnership	\$552,316	Smart Talent	Advanced Manufacturing (3,5)
Portland Community College	\$577,500	Realizing Advanced Manufacturing Potential in Portland	Advanced Manufacturing (3,5)
University of Oregon	\$33,991	Project OnRamp: Growing the Data Science Workforce in the State	Information Technology (1,2)

*Professional and Technical Occupational Clusters determined by the Oregon Talent Plan

The following table shows the Professional and Technical Occupational Clusters represented by the Council’s existing investments:

Represented	Not Represented
1: Systems and data specialists 2: Data and business intelligence analysts 3: Industrial machinists, millwrights and operators of highly computerized and/or automated processes 5: Technologically skilled mechanics and maintenance technicians 6: Mental and behavioral counselors 7: Interdisciplinary engineers 8: Primary health care practitioners 9: Cyber and information security Specialists	4: Rehabilitation therapists and assistants 10: Advanced materials engineers and scientists

Round 2 Proposals Recommended for Funding

Two proposals submitted in Round 2 are recommended for a directed investment:

1. The **Worksystems** proposal was held for possible consideration as a directed investment so that the Council could consider whether it could be expanded to function as a platform for statewide delivery of online education and training. The Round 2 finalist evaluation team identified the lack of a consistent platform for delivery of education and training content across the state. Staff have followed-up with each of the Round 2 grant recipients and Worksystems to better understand the range of online delivery needs. After these conversations, it is clear that more discussion is needed before investing in the capacity of any existing system.

Recommendation: The Worksystems TrainOregon project was highly ranked and should be funded as proposed (\$489,153) to implement the project as submitted in Round 2. (Exhibit 1)

2. The **Oregon Bioscience Association** (Oregon Bio) proposal was held for directed investment because of the organization’s significant experience in implementing industry-based professional skills development curriculum. As a directed investment, the Council could explicitly learn from their experience and ask them to help build the template for this type of model, not just invest in the program.

Recommendation: Fund the **Oregon Bioscience Association** to develop a model to expand the reach of Oregon Bio’s industry-based professional development model to a new industry, create a viable internship program model, and create a template/model with proven efficacy for taking the BioPro and BioCatalyst programs to scale. The Council and Oregon Bio are still negotiating a final scope of work and budget request. A summary of the proposed deliverables is attached. (Exhibit 2)

Directed Investments Analysis

We do not know from the data currently available to us whether these investments are making a significant impact on the talent gaps, so it is hard to conclude that the investments in any of these occupations is sufficient to make a real difference in how many or how well workers are being trained and prepared for industry. What we do know is that we need more explicit learning about what makes professional development, finishing schools or other education/training models successful so they can be replicated in new locations, organizations or industries.

The Oregon Bio proposal represents development of an industry-based professional skills development model. Staff and councilors have had conversations with a variety of industry, workforce and education partners about additional types of models, including:

1. **Professional skills within education.** This includes models within specific programs or tracks, integrated into a college curriculum, at the undergrad or graduate levels, or as the final year. *(Better)*
2. **Internship models** for connecting industry with education partners to provide emerging workers with better experiential learning and work exposure and industry with more meaningful internships. *(Better)*
3. **Knowledge and skills transfer** within industries or companies to build methods for experienced and soon-to-leave employees to transfer that knowledge and skills to incumbent and emerging workers. *(Better and Faster)*
4. Accelerated program models designed to prepare **students holding non-technical undergraduate degrees** for graduate programs in IT, data science or other priority occupations. *(Faster)*
5. Short-term **rapidly deployed models especially for incumbent workers.** *(Retool, Upgrade, Upscale)*

Staff recommend the Committee discuss the model types and infrastructure gaps described above, and any others that members may identify, where a Council investment could make a real difference in training model development or infrastructure. Those models prioritized by the Committee will then be shared at the August Council meeting. Staff and interested Councilors will then engage potential partners to bring back more developed proposals and requested funding amounts for Council investment approval in September.

The table below lists the project models that have been identified for further consideration through discussions with partners involved in Round 1 and 2. Additional information is provided in the attached exhibits.

Organization	~Request
BendPoly	
Summary: Desire to glean value from current program with a focus on finding ideas that engage graduates and incumbent workers; helping them be more productive, better prepared and ready to become a contributor. www.bendpoly.com	
OSU College of Science/ Doug Keszler, Chris Larson	\$220k
<i>STEM Integrated Professional Development Platform – STEM Connect</i> Summary: Development of professional development modules and how to deploy/weave into the College of Science curriculum.	
OSU EECS / Fuxin Li	\$247.5k
<i>Toward Big Data Analysis: Focused Training on Deep Learning and Large-Scale Visualization</i> Summary: Education and training program for emerging and incumbent workers focused on using tools and methods of deep learning and information visualization for big data analysis. Boot camp focused on incumbent workers to provide mentors, guidance and oversight in working through data problems.	

Portland State (w/OHSU) / Warren Harrison	
<i>New Beginnings for Biomedical Informatics</i>	
Summary: Proposal to develop a 30-week accelerated program designed to prepare high achieving students holding non-technical undergraduate degrees to be successful in the PSU Master of Science in Computer Science or the OHSU Master of Science in Biomedical Informatics.	
Rogue CC / Ralph Henderson, Mary O'Kief	\$221k
<i>Knowledge and Skills Transfer Project (KSTP)</i>	
Summary: Industry-led effort in Southern Oregon to test model of how to transfer the wisdom, experience and skills of retiring workers to inexperienced incumbent workers. Will include industry certifications for the coursework identified as needed for the employee cohort.	
University of Portland / Sharon Jones, Amy Eaton	
<i>Employment Readiness for Engineering Students</i>	
Summary: Develop a model for strengthening the T-shaped skills for Oregon students to ensure that students receive the finishing skills needed to be better prepared for the workforce.	

OREGON TALENT COUNCIL ROUND 2 GRANT APPLICATION #16-0429

Proposer Organization Name:	Worksystems, Inc.
Primary Contact Person/Title:	Nick Knudsen, Business Services Manager
Address:	1618 SW 1 st Ave. Suite 450
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Proposal Title:	Train Oregon
Proposal Abstract:	<p>Train Oregon is a customized online learning platform developed in Portland by Worksystems – the Local Workforce Development Board for the Metro Area – and OpenSesame, an innovative technology firm focused on delivery of high-quality, online, on-demand workforce training. Train Oregon was designed to serve as a dedicated training portal for Oregonians being served through WorkSource, the state’s public workforce system. The site is currently being piloted in the Portland Metro area with WorkSource customers enrolled in industry-specific workforce training projects. Through the proposed Oregon Talent Council grant, Worksystems, in partnership with the other Local Workforce Development Boards in the State (known collectively as Oregon Workforce Partnership), will launch Train Oregon statewide. This expansion will train 4,500 emerging and incumbent workers across the state in key employability/soft skills, as well as critical industry-specific technical skills. Ultimately, the goal of this project is to build and launch a fully customizable, statewide online learning platform that can be continuously adapted to the workforce training needs of the state’s businesses and job seekers.</p>
Industry Sector(s) Addressed:	<p>Train Oregon is currently built to offer industry-specific training in Healthcare, Technology and Advanced Manufacturing. Through the course of the expansion year, the project team will seek to add high-quality content relevant to these industries as well as the other Talent Council-prioritized industries of Bioscience and Energy Technologies/Utilities. The project’s goal is to offer quality content for each targeted sector.</p>
Collaborating Institutions:	<p>Oregon Workforce Partnership: Clackamas Workforce Partnership, East Cascades Workforce Development Board, Eastern Oregon Workforce Board, Incite, Oregon Northwest Workforce Investment Board, Rogue Workforce Partnership, Southwest Oregon Workforce Investment Board</p>
Industry Partners:	<p>OpenSesame, Manufacturing 21, Oregon Bioscience Association, Northwest Food Processors Association and Technology Association of Oregon</p>

Occupational Cluster(s) Addressed: (see page 2)	Train Oregon is already poised to offer technical training in the following Council-prioritized clusters: Systems and Data Specialists, Industrial Machinists, Millwrights and Operators, and Technologically Skilled Mechanics and Maintenance Technicians, and Cyber and Information Security. During the implementation year, the project team and OpenSesame will seek content to address the other OTC-targeted occupational clusters. In addition, many of the modules available through Train Oregon (Project Management, for example) are related to employability and soft skills that apply across all occupations.
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Amount Requested from OTC:	\$489,153
% of Budget represented by OTC grant:	49%
% of Budget represented by sponsoring institution:	33%
% of Budget represented by industry/other partners:	18%

DISCUSSION DRAFT

Q#1 Project Description

Overview: WorkSource Oregon has served 128,000 job seekers and career changers over the last 12 months, including the delivery of 33,000 one-on-one services and 85,000 instances of in-person workshop attendance. In addition, 1,805 people received short- to medium-term training services through WorkSource-funded scholarships, resulting in 1,596 postsecondary training completions. Despite this high utilization of the WorkSource system by the state’s job seekers, WorkSource relies nearly exclusively on Center-based, in-person services to support the career goals of Oregonians, which represents a missed opportunity for serving:

- People who lack child care or sustained transportation
- Oregonians who live in remote areas and may have to drive great distances to receive services
- Underemployed and incumbent workers unable to attend during working hours when Centers are open
- Higher-skilled individuals who are between jobs but less inclined to access support from a public system

In late 2014, noting these challenges, Worksystems - the Local Workforce Development Board for the Portland Metro Area - developed a conceptual model for an entirely new WorkSource service category: an “online one-stop” to offer flexible, 24/7 access to workforce development and training services for people across the metro area. In winter of 2015, Worksystems released an RFP to find an organization that specialized in online learning and was capable of delivering the model. The successful bidder – OpenSesame (a local Portland tech firm and grant partner) – proposed *Train Oregon*.

Since then, Train Oregon¹ has been developed as a gateway to online technical skill and employability/soft skill training content, as well as courses that prepare users to take industry certification exams. Based on Worksystems’ stated training priorities, OpenSesame has sought and aggregated content from dozens of online training providers, which can all be easily accessed through the portal. The site has the following features:

- A fully customizable web interface that makes navigability intuitive.
- Back-end connectivity to the public workforce system’s I-Trac data system, which enables WorkSource staff to authorize specific content for individual customers and monitor their progress through training.
- Long-term user licensing – once someone is authorized to view content, they have a full year of access to that course bundle. This can mean (for example – in the case of the “WorkSource+” cost grouping) access to 1,500 courses for a whole year for a total of \$20, per user.
- Centralized billing – Train Oregon is free to job seekers. OpenSesame bills Worksystems directly for all new course bundles accessed by users in a given month, which lends a seamless experience to customers and means WorkSource Centers are not burdened with administering payments.
- A career exploration section that highlights targeted sectors. This portion of the site includes occupation-specific career overview videos and general labor market information.
- The ability to continuously add new training content from diverse content providers with ease.

Train Oregon is currently in a beta testing phase – serving a select population of WorkSource Portland Metro customers who are enrolled in industry-specific workforce training grants. IT and manufacturing-focused customers of Worksystems’ Reboot NW grant, for example, are currently using Train Oregon to access ToolingU’s robotics coursework, LearnSmart’s Python courses and Simplilearn’s Project Management training.

Alignment with the Purpose of the Grant: Based on the promise of this platform, OpenSesame (and the Train Oregon tool by implication) were noted on page two of the Oregon Talent Plan as one of the “scalable systems to deliver distance learning...that enable workers to more quickly reach needed proficiency and productivity, and that extend the geographic reach throughout the state.” Train Oregon is indeed in a position to undergo **pilot expansion** during the timeframe of this grant, and this is the core purpose of the requested funding. This co-invested project will address urgent talent and access gaps by building out the Train Oregon tool to offer training for high-demand skills across the state, including rural and underserved communities.

The project will leverage the existing work of Workforce Development Boards in each area of the state by infusing input from existing local sector strategies to inform the development and deployment of Train Oregon. Local sector strategies have been developed in concert with local industry champions, economic development

¹ Explore what Train Oregon has to offer at www.trainoregon.org. Actual training content can currently only be launched by enrolled WorkSource customers who have been pre-authorized by WorkSource staff through the I-Trac data system.

and training partners. WDB staff involved in the convening of industry around sector strategies will work with local business leaders to create a wish list for content adaptations and additions to the Train Oregon site – based on needs for both new workers and incumbent workers. Grant partners Manufacturing 21, Oregon Bioscience Association, Northwest Food Processors Association and Technology Association of Oregon are also leveraging their expertise by informing development of career exploration modules, site content, and broader industry connectivity through member organizations (see attached letters for specific commitments).

Train Oregon is currently poised to deliver technical training in the following Council-prioritized clusters: Systems and Data Specialists, Industrial Machinists, Millwrights and Operators, Technologically Skilled Mechanics and Maintenance Technicians, and Cyber and Information Security. Current offerings align explicitly with the Advanced Manufacturing, Healthcare and Information Technology target industries. During the implementation year, the project team and OpenSesame will seek out content to address the other OTC-targeted occupational clusters and sectors. In addition, many of the employability, professional and soft skill modules available through Train Oregon (Project Management, for example) curate skills that apply across all occupations. The Question #3 response below provides in-depth mapping of Train Oregon’s content to the Oregon Talent Council-targeted occupations and industries.

Alignment with the Scope of Activities: Through this project – a) completers of online training modules will benefit from improved technical skills and increased employability; and b) incumbent workers in Oregon will gain access to cost-effective, just-in-time training through Train Oregon’s online, on-demand delivery modality.

When awarded, grant dollars from the Talent Council’s RFA will be braided with other local, state, federal and private funds to complete the development of Train Oregon and scale it to become a statewide platform. Worksystems and partners have promised \$515,636 in leverage for this project – 51% of the project’s total cost. Ultimately, the goal of this project is to build a fully customizable, statewide online learning platform that can be continuously adapted to the workforce training needs of the state’s businesses and job seekers. Specific **goals** for the Talent Council’s co-investment are:

- Scope, develop, implement and streamline a common process through which: a) Job seekers from across the state can gain access to and utilize the platform; b) WorkSource staff can be continuously trained and updated on the content available and on a set, common process for authorizing access for users; c) Data are reviewed and reports are disseminated to local areas with usage and completion information, and; d) Feedback about the site and its learning content can be regularly collected and reviewed, leading to alterations in existing offerings and development of new content.
- Further develop and expand content on the site to match with the Talent Council’s industry and occupational priorities and local areas’ sector strategies.
- Pilot a “virtual coach” – Centralized WorkSource staff with a statewide focus dedicated to encouraging online learners to complete coursework, providing technical assistance, and advising on further training options.
- Design new content for the site, to include publically-available career exploration courses that focus on Talent Council-targeted sectors, with a special highlight on high-growth and mission-critical occupations.
- Pair Train Oregon training with the WorkSource system’s On-the-Job training program, Back to Work Oregon, to enhance effectiveness by reinforcing workplace-based learning with technical and soft skill development.
- Develop and launch a process and structure for target industry businesses from across the state to access Train Oregon and its bulk-purchase rates, so that they can use the platform in a streamlined way to train incumbent workers in high-growth fields and along career pathways that lead to priority occupations.
- Develop a formal sustainability plan, with WIOA formula (WorkSource) resources as a core ongoing funding base.
- Create, deploy and aggregate data from job seeker, incumbent worker and employer surveys to measure the perceived impact of delivered training on job seeker marketability and job attainment, as well as incumbent employee development, advancement and retention.

Return on Investment:

- Deliver Train Oregon services for 4,000 WorkSource customers and 500 incumbent workers across the state, resulting in 21,000 course completions (5,000 in target industry-specific training).
- Create a nimble and accessible system for rapidly responding to any future industry/job seeker skill development needs.

Oregon Bioscience Directed Investment Proposed Deliverables

I. Reach/Expand Model to New Industry

Talent Council Desired Outcomes

Creation of a Template/Model with proven efficacy that can be shared, promoted and deployed to industry (for their adoption or where they can engage Oregon Bio to implement), including the following elements:

1. Planning requirements
2. Development process and steps
3. Identify what may be different by industry
4. Help develop the definition of efficacy, including “required” industry engagement, operational parameters, identification of key performance indicators, and tactical needs assessment
5. Guidelines, framework, and best practices (including training capacity and potential certificates)
6. Curriculum – Core, Industry, Professional Dev/Soft Skills
 - a. Identified key components and ratio of activity
 - b. Clear definition of industry elements for comparative development and extension

II. Internship Pilot Program and Model

Talent Council Outcomes/What we get

Council desires to identify the success factors and components to create a viable internship program, including the following elements of an internship model.

1. Lessons learned from building the engagement and gaining input of industry.
2. Development of key performance indicators, which form the requirements of success
3. Guidelines for formulating and executing internships in a variety of occupations that cross industries (i.e., marketing and project management)
4. Identify methods utilized to generate statewide reach to students beyond the traditional universities and programs of industry
5. Identify research and/or lessons learned on internship support and creating the connection of education and industry.

III. Scale BioPro and BioCatalyst to Central Oregon and Willamette Valley

Talent Council Outcomes/What we get

Creation of a Template/Model with proven efficacy that can be shared, promoted and deployed in taking a model to scale, including the following elements:

1. Planning requirements
2. Development process and steps
3. Identify what may be different by industry
4. Help develop the definition of efficacy, including “required” industry engagement, operational parameters, identification of key performance indicators, and tactical needs assessment
5. Guidelines, framework, and best practices (including training capacity and potential certificates)
6. Curriculum – Core, Industry, Professional Dev/Soft Skills
 - a. Identified key components and ratio of activity
 - b. Clear definition of industry elements for comparative development and extension

NOTE: These deliverables are draft and are still being discussed and negotiated with the Oregon Bioscience Association.