
**Agenda
December 7, 2017**

	<u>Page</u>
1. Call to Order/Roll/Declaration of a Quorum (3:00pm) <i>Chair Graham</i>	
2. Reports	
2.1 President's Report and Discussion (30 min) <i>President Naganathan</i>	
2.2 Foundation and Advancement Report (3:30pm) (15 min) <i>AVP Ricketts</i>	1
2.3 ASOIT Wilsonville Report (3:45pm) (10 min) <i>Vice- President May</i>	
2.4 Administrative Council Report (3:55pm) (10 min) <i>Representative Kass</i>	
2.5 Faculty Senate Report (4:05pm) (20 min) <i>President Thaemert</i>	
2.6 Legislative Session Report (4:25pm) (10 min) <i>AVP Sinner</i>	
2.7 Enrollment Report (4:35pm) (10 min) <i>VP Foley</i>	
2.8 Academic Quality and Student Success Committee Report (4:45pm) (5 min) <i>Trustee Brown</i>	
2.9 Finance and Facilities Committee Report (4:50pm) (5 min) <i>Vice Chair Sliwa</i>	
2.10 Executive Committee Report (4:55pm) (5 min) <i>Chair Graham</i>	
3. Consent Agenda (5:00pm)(5 min) <i>Chair Graham</i>	
3.1 Approve a Capital Spending Plan and Authorize the Use of Cash	3
4. Motion to Continue the Meeting to 8am on December 8, 2017	

December 8, 2017

5. Call to Order/Roll/Declaration of a Quorum (8:00am) <i>Chair Graham</i>	
6. Discussion Items	
6.1 Information Technology Services Strategic Plan Presentation (50 min) <i>AVP Jones</i>	6
6.2 OMIC Report (8:50am) (30 min) <i>VP McKinney</i>	14
6.3 Long-term Goal Discussion (9:20am) (60 min) <i>President Naganathan</i>	
7. Other Matters (10:20am) (10 min)	
8. Public Comment (10:30am) (15 min)	
9. Roundtable (10:45am) (15 min)	
10. Adjournment (11:00am)	



The Oregon Tech Foundation

The Oregon Tech Foundation was established in 1969. Its mission is to:

- Further the educational, cultural, charitable, and service activities of Oregon Tech;
- Acquire financial support through gifts, grants, bequests, and capital campaigns;
- Promote the public relations aspect of the university to expand and improve the understanding of its programs among students, alumni, potential employers of graduates, friends of Oregon Tech and other individuals, groups, organizations, or publics.

The Foundation is a 501(c)(3) organization and is a separate legal entity from the University governed by a governing board currently populated with 25 volunteers board members who are tasked with management and growth of the assets of the Foundation. The Foundation Board meets three times per year.

The University Development Department

The University Development Department supports the mission of Oregon Tech by connecting donors, alumni, and friends with philanthropic opportunities at the university.

The Development team expands the network of Oregon Tech friendships and donors by explaining Oregon Tech's mission, hosting activities, promoting our initiatives, and spreading the word about the exceptional national rankings of Oregon Tech and the success of Oregon Tech graduates.

Currently, there is a staff of 9 personnel who operate the Development Department, Alumni Relations efforts and the day-to-day operation of the Foundation, and are jointly funded by the Foundation and Oregon Tech. The Exchange Agreement between Oregon Tech and the Foundation details our common goals and support for the Oregon Tech Foundation/Development Department.

Current Officers

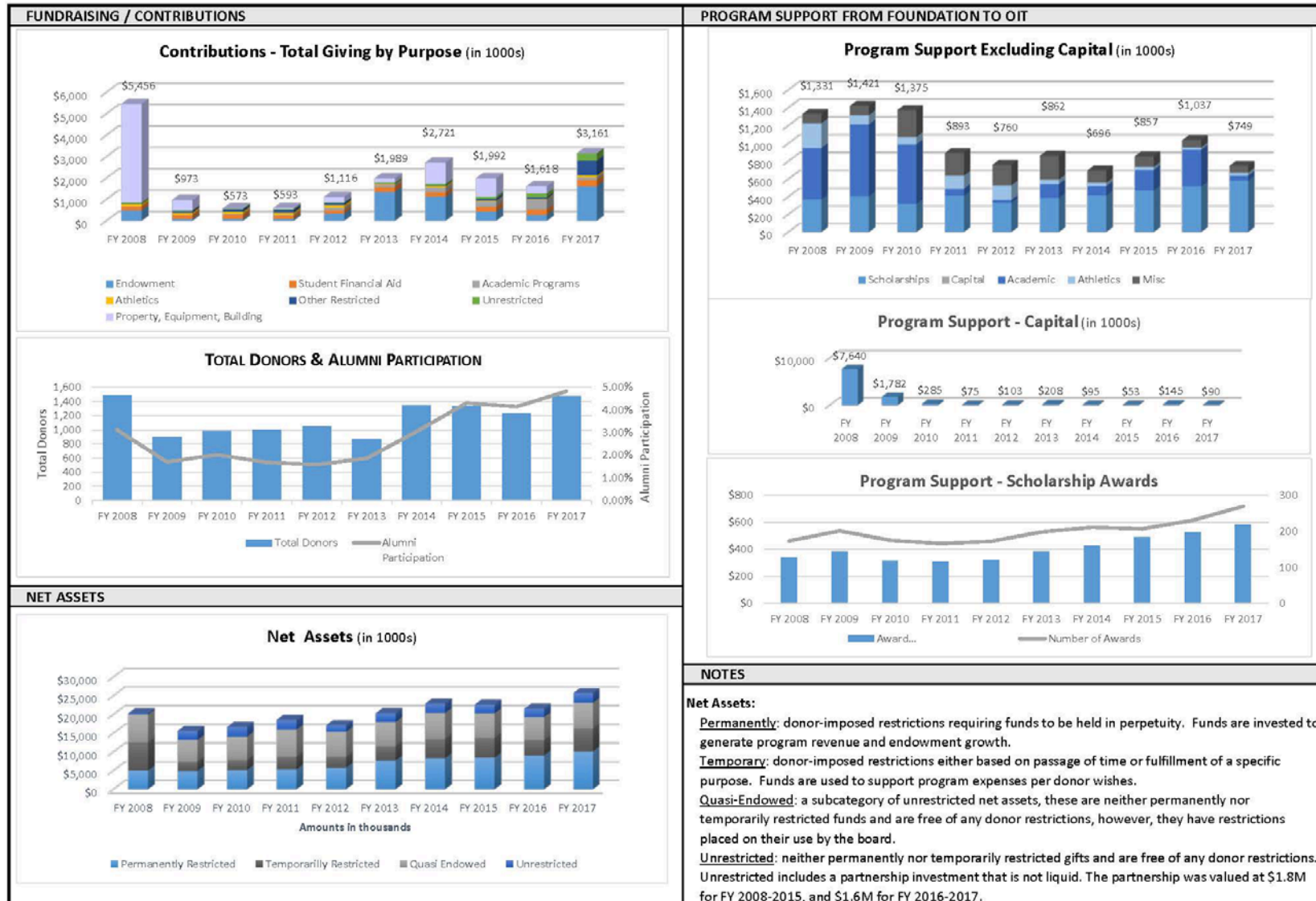
Diedra Thompson, President, Intel, retired

James Blair, Vice-President, Integrated Risk Management Solutions, LLC

Trevor Mauch, Secretary, Carrot

Don Young, Treasurer, JELD-WEN, Inc., retired

OREGON TECH FOUNDATION TRUSTEE DASHBOARD FOR FISCAL YEAR 2017



CONSENT

Agenda Item No. 3.1

Approval of a Capital Project Spending Plan and Authorization to Use Cash

Summary

Oregon Tech has four large capital projects funded through three separate bond authorizations approved during the 2017 Legislative Session. These projects include Cornett Phase II, the Center of Excellence in Engineering Technology (funded as a single package), OMIC Research and Development Facility improvements, and the Student Recreation Center upgrade project. To expedite planning, design construction and capture cost efficiencies with the approved projects, Oregon Tech wishes to expend bond proceeds in advance of the bond sale using university cash balances. The bonds for these projects are expected to be sold during the Spring of 2019

Overview

During the 2017 Legislative Session several large capital projects were approved for Oregon Tech. The State of Oregon typically approves General Fund funded capital projects, including Article XI-G and Article XI-Q bonds without also approving expenditure authority for debt service on these bonds during the same biennia. This means that bonds are not sold, and funds from the state for project reimbursement are not available until the last two quarters of the biennia. During this biennia Article XI-F (self-funded) bonds for universities are also unlikely to be sold until the last two quarters of the biennia for various reasons. However, institutions may pre-spend approved bond proceeds up to 18 months in advance of bond issuance with approval from the Oregon Department of Administrative Services and an executed reimbursement resolution in place. Oregon Tech has initiated the process to execute such resolutions.

Pre-spending bond proceeds requires the university to use bridge financing, though either external financing or utilizing internal working capital, to begin projects before bonds are sold. The cost of capital, including foregone interest or interest on external funding are not reimbursable expenses according to the grant agreements established by the State of Oregon and the Higher Education Coordinating Commission. The institution also risks that the state does not sell the bonds, or delays their sale, rendering some portion of pre-issuance expenses unreimbursable. This risk exists, but in the opinion of management is de minimis in nature.

Oregon Tech has sufficient cash balances to self-finance the initiation of each of these projects before bonds are issued by the state in Spring 2019.

Oregon Tech has four major projects, funded through three legislative authorizations; Cornett Phase II, the Center of Excellence in Engineering Technology, OMIC Research and Development Facility

improvements and the Student Recreation Center upgrade project. Facilities and Project Management has developed several project timelines depending on availability of cash to finance project activity. The most aggressive plan, as outline below expects to use \$11.5 million dollars in available cash balances to support projects before bonds are issued in the spring of 2019. This allows Oregon Tech to minimize time to completion, increase cost savings from pairing projects and reducing construction inflation and effective sequencing, particularly as it relates to the Cornett Hall Phase II renovation. This plan can also be modulated down if cash balances deteriorate and project timelines pushed back if necessary to ensure the institution retains sufficient financial flexibility.

Project Spend Plan and Analysis

Center for Excellence in Engineering Technology
Project Total: \$35,000,000
Design: September 2018 through June 2019
Construction: June 2019 (after bond sale) through December 2020
Reimbursed Spending: \$3,000,000

Cornett Hall Phase II
Project Total: \$7,000,000
New Roof: June 2018 through September 2018 (\$1.5M)
East Side Exterior: June 2018 through September 2018 (\$500K)
East Side Phase 2 Partial Interior: June 2018 through September 2018 (\$500K)
Reimbursed Spending: \$2,500,000

Student Recreation Center
Project Total: \$3,500,000
Scope: Lower Level and Exterior
Design: January 2018 through June 2018
Construction: July 2018 through September 2019
Reimbursed Spending: \$2,500,000

OMIC R&D Facility Upgrade
Project Total: \$3,500,000
Design: November 2017 - January 2018 (Phase I)
Design: April 2018 - July 2018 (Phase II)
Construction: January 2017 through June 2019
Reimbursed Spending: \$3,500,000

Total Reimbursed Spending: \$11,500,000

Oregon Tech's cash balances have been strong for the past several years and are forecast to remain that way. As of Q1 2017 Oregon Tech had \$31.4 million in cash, cash equivalents and Quasi-Endowment assets on hand, or 153 days of operating expenses. Of this \$17.2 million was E&G cash. The Quasi-Endowment can be readily converted to cash within 30 days. Cash balances are

likely to increase in the near term as accounts receivable related to previously unbilled grant expenditures and capital reimbursements work through the pipeline.

Over the last 16 months the average available cash balance (excluding restricted funds) was \$24.8 million, and conservative estimates, which assume; flat enrollment with low tuition increases and increases in labor, OPE and S&S expenses, anticipate that over the coming 12 months will fall to an average of \$22.7 million, with a trough of \$17.2M in December 2017. There are several typical cash balance troughs throughout the year related to Oregon Tech's periodic business cycle driven by relatively consistent expenses with highly concentrated cash inflows quarterly from the State and once in October, January and March/April from student tuition payments at the start of each regular academic term. These cash troughs typically come during December, June and September.

With anticipated project spend plans, September of 2018 appears to be the weakest cash position with \$7.7M in cash and hand, at month end and *after* payroll has been deducted. This is sufficient cash on hand to manage ongoing operations without impediment. If Oregon Tech's cash position is below levels management deems be sufficient, a portion of the Quasi-Endowment will be liquidated to support the institution's cash position and replenished once bonds are sold and reimbursements from the State of Oregon are received in late Spring of 2019.

Management does not expect there to be any time in which cash plus the Quasi-Endowment falls below 70 days on hand during the forecast period, and is likely to remain consistently above 100 days except during months between quarterly General Fund distributions and tuition payments at the start of academic terms.

Staff Recommendation

Staff recommended the Finance & Facilities Committee recommend to the Board of Trustees approval of \$11.5 million dollars in expenditures in advance of bond proceeds for the following Legislatively approved projects and associated totals:

- Center for Excellence in Engineering Technology/Cornett Hall Renovation – \$5,500,000
- Oregon Manufacturing Innovation Center, Research and Development Facility – \$3,500,000
- Student Recreation Center – \$2,500,000 million

Staff further recommended the Finance & Facilities Committee recommend to the Board of Trustees to authorize the President or his designee to utilize funds in excess of \$1 million dollars in the Quasi-Endowment, if deemed necessary by management, to fund capital proceeds. Funds utilized for these purposes will be repaid when bonds are sold and the State of Oregon reimburses Oregon Tech.

DISCUSSION

Agenda Item No. 6.1

Information Technology Services Strategic Plan

Background

At the October 26, 2017 meeting, Information Technology Services CIO and AVP, Jim Jones, gave a brief project status update. This presentation is a more in-depth report and explanation of the strategic plan that will guide ITS.

Staff Recommendation

No action required. For discussion purposes only.

Attachments

- Report to the Board of Trustees
- PowerPoint Presentation

Information Technology Services Update

Report to the Board of Trustees

December 8, 2017

Respectfully submitted by: AVP CIO Jim R. Jones

Infrastructure

Redundant Internet Service Provider (ISP): – *COMPLETED August 2017*

Cloud Migration: Document storage – Scheduled to complete December 15 (currently ahead of schedule)

Skype for Business: The current Avaya phone system will be end of life and end of support by December of this year. ITS is aggressively migrating to the cloud version of Skype for Business as a replacement strategy. This will modernize the phone system and seamlessly integrate into the Microsoft Office 365 productivity suite. UPDATE: Skype phone rollout is completed, just minor clean up remaining. Decommissioning of old Avaya system is on schedule to complete on December 27th.

Office 365: Project schedule is now fast-tracked – original start date was set for January 15th now beginning in December with an anticipated completion date of March 2018.

Faculty Engagement: Launched the Academic Technology Advisory Council (ATAC). The council has met twice and has completed a rubric for the assessment of classrooms, scheduled a review of all classrooms before the end of the calendar year, and created a survey to collect input from faculty on classroom needs and requirements.

ITS Strategic Planning Process: On December 12, ITS will begin developing a five year Strategic Plan in a series of workshops with representation from all areas of campus. Ron Yanowsky, top strategic planning researcher from the Education Advisory Board, will be on campus in Klamath Falls to kick off the planning workshop series with key stakeholders. A draft ITS Strategic Plan will be completed shortly after the workshop series is completed.

Supporting Students

CIO Jones met with students on November 6th in a town hall style meeting with the ASOIT Klamath Falls. Core themes: wireless bandwidth in residence halls; printing services and availability; computer lab aging and availability. Each of the themes brought up will be prioritized and addressed.

Innovations

Augmented (AR) and Virtual Reality (VR): Oregon Tech Experience augmented reality app now available in the Apple Store and Google Play. The first AR mailing scheduled to go out in December. The target audience of the mailing is dual credit students in the ACP program.





Information Technology Services Update

- Redundant ISP - COMPLETE
- Cloud Migration – Individual File Storage – COMPLETE
 - Department file storage launches January
- Skype for Business – COMPLETE
- Office 365 – Fast Tracked
- Faculty Innovation Center – Construction to begin December



Information Security

- Cyber Security Insurance
- Information Security Awareness Training
- IT Security Framework



Student Support

- Student Town Hall with Klamath Falls ASOIT



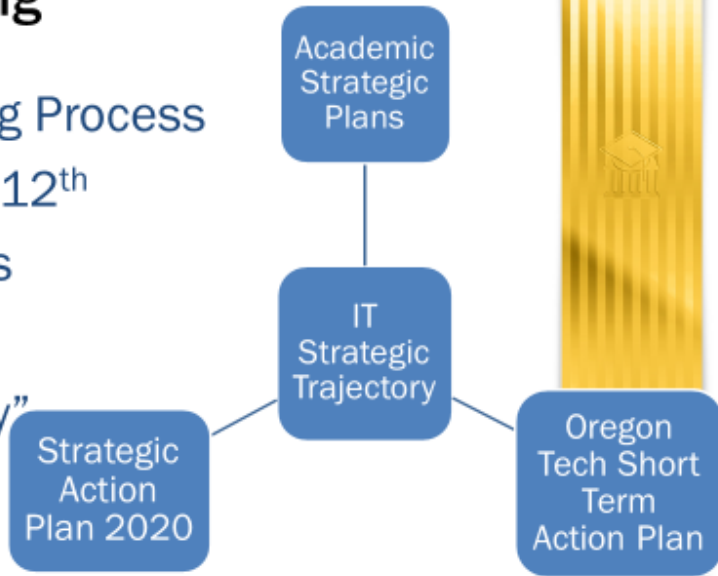
Innovations

- Oregon Tech Experience App Available



IT Strategic Planning

- IT Strategic Planning Process
- Kick Off December 12th
- Series of workshops
- Broad input
- “Strategic Trajectory”



The Value of an IT Strategic Plan

The Foundation of a Strategic IT Department

Well-Created Plan Enables Consensus, Transparency



Process - Alignment

Aligned with Institution, Informed by Customers

Hierarchy of IT Strategic Planning



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Source: Education Advisory Board interviews and analysis

DISCUSSION

Agenda Item No. 6.2

OMIC Report

Background

VP Laura McKinney will review the progress of the Oregon Manufacturing Innovation Center.

Staff Recommendation

No action required. For discussion purposes only.

Attachments

- Report to the Board of Trustees
- PowerPoint Presentation



Overview

This document is a progress report and high-level plan for an Oregon Tech audience. The scope covers progress to date for OMIC R&D, with a focus on Oregon Tech's roles and goals.

As identified in the first progress report in June 2016, the overall goals of the OMIC R&D initiative for Oregon Tech are:

- Expand business engagement with Oregon's advanced manufacturing industry, resulting in applied research support;
- Build a nationally distinguished mechanical, manufacturing and applied business education offering in the Portland metro area;
- Complement Oregon Tech's technical expertise and reputation by deepening applied research connections with industry, PSU and OSU.

In summary, since the last report, the OMIC R&D has made **significant and rapid progress** toward successful launch, by acquiring and beginning to equip the building, by solidifying the collaboration agreement and continuing to recruit new members, by garnering State support sufficient to ensure infrastructure and operational health for this first biennium, and by launching pilot projects based on identified industry needs.

However, this is a complex public-private partnership, and OMIC R&D's ability to achieve its goals will depend on the health of the enterprise partners and the continuing focus on producing tangible value for the industry partners in a short time frame.



<u>1</u>	<u>BACKGROUND: OREGON MANUFACTURING INNOVATION CENTER</u>	<u>3</u>
1.1	COLLABORATION AGREEMENT	4
1.2	STATE OF OREGON SUPPORT	5
1.3	BOARD OF GOVERNORS' STRATEGY	6
<u>2</u>	<u>OMIC R&D: OREGON TECH'S ROLES AND SUCCESS CRITERIA</u>	<u>7</u>
2.1	OREGON TECH: RESEARCH PARTNER	7
2.2	OREGON TECH: HOST INSTITUTION	8
2.3	OREGON TECH: LANDLORD	9
<u>3</u>	<u>STATUS: OMIC R&D LAUNCH PHASE</u>	<u>10</u>
3.1	KEY MILESTONES FOR JANUARY 2016-NOVEMBER 2017	11
3.2	PLANNED RESULTS FOR DECEMBER 2017-MARCH 2018	11
<u>4</u>	<u>OREGON TECH ACADEMIC PROGRAMS</u>	<u>12</u>
4.1	MECHANICAL AND MANUFACTURING ENGINEERING	12
4.2	MANAGEMENT	13
<u>5</u>	<u>FUTURE</u>	<u>13</u>
<u>6</u>	<u>APPENDIX: FACULTY BIOS</u>	<u>14</u>

1 Background: Oregon Manufacturing Innovation Center

Build an advanced manufacturing research and education center in Portland to support Oregon metals manufacturers in meeting global needs for advancement in materials, manufacturing and processes.

The Center is modeled on the successful Advanced Manufacturing Research Centre in Sheffield England (<http://www.amrc.co.uk/>) which has transformed a distressed and economically disadvantaged region into a world center for research with multiple major manufacturers co-located in an industrial park. Manufacturers of all sizes collaboratively invest in applied research projects that are undertaken in the context of an academic environment.

OMIC is the 15th such research center established with Boeing leadership worldwide, and the first Boeing has sponsored in the United States.

The Portland area is significant to Boeing, since it has a world leading manufacturing center located in Gresham that is be one of the major participants in the center.

The OMIC has three components: 1) an advanced research and development center that produces applied research for mature key technologies for members' use (OMIC R&D); 2) a training center which educates the next generation of skilled technicians and engineers (PCC OMIC Training Center); and 3) an enterprise group focused on the development of the business park and larger economic strategies around OMIC (OMIC Enterprise).

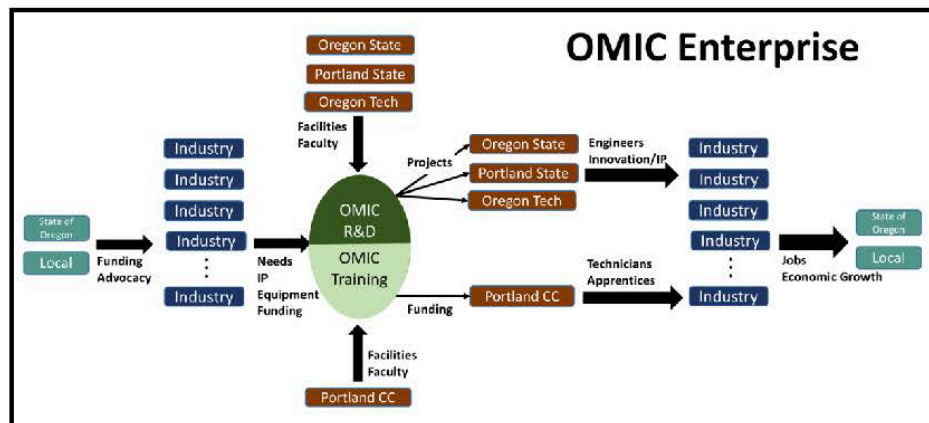
The initial scope of OMIC R&D focuses on metals manufacturing and builds on indigenous skills to serve major industry partners in Oregon. OMIC Training, led by Portland Community College, is targeting apprentice programs in relevant areas of machining and welding. (A full discussion of OMIC Training is outside the scope of this document.) The OMIC Enterprise is solidifying its role and charter in support of the broader economic picture.

In addition, there is industrial development occurring around the OMIC R&D site and the proposed OMIC Training facility in the Scappoose area. The growth of this region should act as an economic engine for OMIC R&D and vice versa.

Overall, the success of OMIC relies on a healthy public-private partnership, including:

- **Industry:** OMIC R&D members, Greater Portland Inc.
- **State of Oregon/local government:** Oregon Economic Development Department (Business Oregon), Oregon Employment Department, Governor's economic policy advisor and workforce policy advisor, legislators, City of Scappoose, Columbia County and others.
- **Academia:** Oregon Tech, Portland State University, Oregon State University, Portland Community College.

The overall enterprise builds the value chain below...





1.1 Collaboration agreement

In July 2017, after 8 months of legal work, 10 launch partners signed a Collaboration Agreement to form the OMIC R&D. The agreement covers intellectual property terms, conditions for publishing results, and a 5-year commitment of money and/or in-kind contributions. Members share the intellectual property generated through joint projects. Industry members may also fund specific projects for their exclusive use through the OMIC R&D, and use the site and its equipment in furtherance of their company's unique goals.

The launch partners include:

- The Boeing Corporation
- Blount, Inc.
- ATI Specialty Alloys & Components
- Daimler Trucks North America LLC
- Hangsterfer's
- Silver Eagle Manufacturing
- Vigor Industrial LLC
- Oregon Institute of Technology
- Portland State University
- Oregon State University

The initial structure of the OMIC R&D was conceived as a 501(c)6 mutual benefit, non-profit corporation. However, during the course of negotiating the Collaboration Agreement, Boeing indicated that they wanted a national lab or a university to be the legal entity, rather than a non-profit corporation. Reasons proffered included the difficulties of having a fiduciary director of the non-profit also be an employee of Boeing, and concerns about the maturity of a fledgling non-profit in handling substantial monies.

At that time, in spring 2017, there was not an obvious national lab candidate, so the presidents of the three universities met and decided that Oregon Tech, with its existing role as the landholder for the OMIC R&D site, would make the best candidate to Host for the OMIC R&D. In May 2017, the directors of the existing 501(c)6 met and voted unanimously to select Oregon Tech as the Host, in preference to a 501(c)6 structure.

Thus, the OMIC R&D is established through a contract with Oregon Tech. All current and future members will sign that contract, which defines the terms and benefits of membership. Oregon Tech has accountability as the fiscal agent for the membership dues and any other project funds that flow through OMIC R&D. A Board of Governors is established through the contract to direct the strategy and investment of the OMIC R&D.

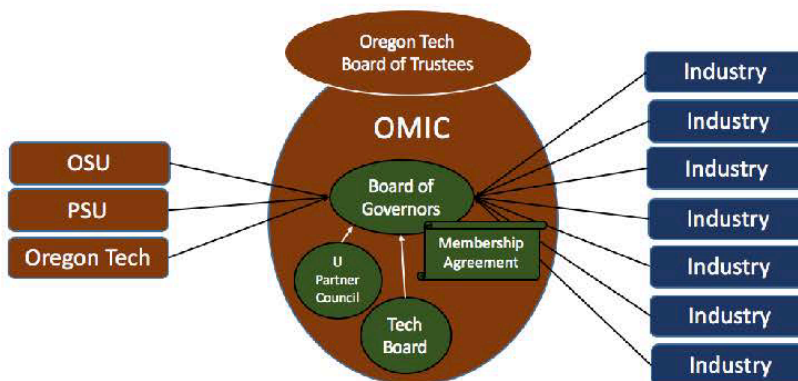
Tier 1 members join at \$300,000 per year and Tier 2 at \$45,000. There is an Associate Member level at \$10,000 per year. In-kind donations in lieu of cash can be accepted by a vote of the Board of Governors of the OMIC R&D.

Since that time, OMIC R&D has signed additional members:

- Mitsubishi Materials
- WFL Millturn Technologies
- OSG USA
- Summit Manufacturing

And three more should be approved by November 30:

- Kennametal
- CGTech/Vericut
- Walter Tools

Organization of OMIC R&D


1.2 State of Oregon support

In addition to the \$2.5M provided last year towards the purchase of the Scappoose facility, the legislature of the State of Oregon has allotted both operational and capital funding as follows to OMIC R&D.

Operational Funding. \$6,600,000 in operational funding was provided to OMIC from two sources.

- \$3.6M in Business Oregon's budget. This money may be recurring into the next biennium.
- \$3.0M is one-time, repurposed Connect Oregon money ([HB 3470](#) p. 4).

The operational funding is expected to be disbursed in eight equal increments (\$825,000 per quarter) throughout the biennium pending completion of tasks and achievement of milestones from the previous quarter. Business Oregon has agreed to try to be flexible, though, if there is need for more money in a quarter because of a large expenditure.

At this point, Oregon Tech is finalizing an initial 6-month contract for 25% of this operational funding to commence the work of OMIC R&D for the period July 2017-December 2017. The contract period may be extended to accommodate some minor delays in the schedule.

Road Funding. \$3,390,000 in lottery bond funding was allocated for roads for the R&D building and training center ([SB 5530](#) p. 12). This appears to be one-time funding.

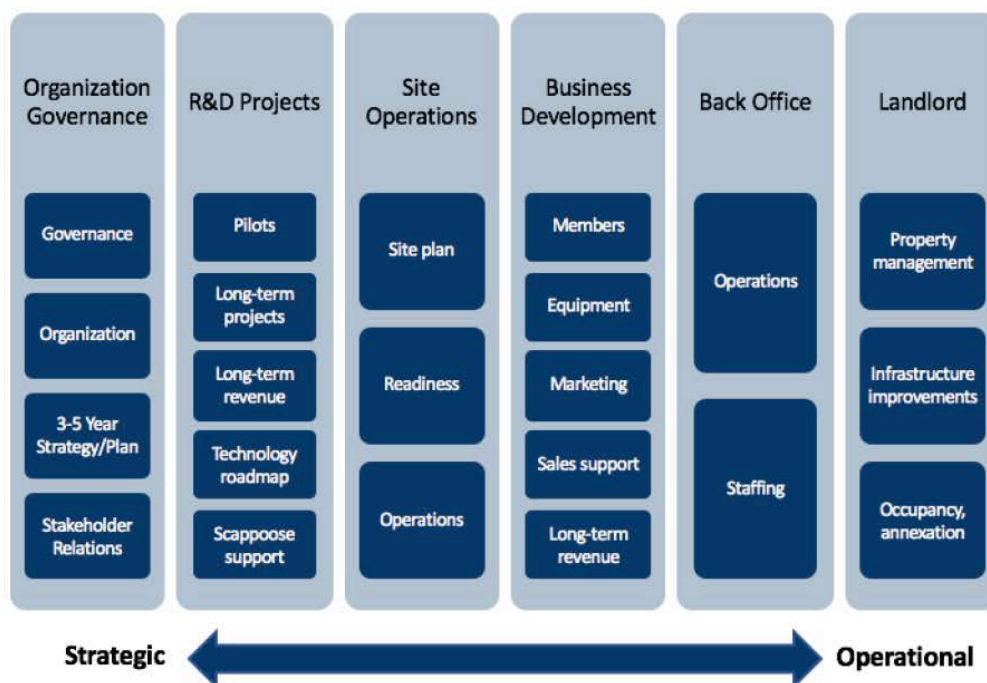
- LFO's understanding is that \$1M of this is for the OMIC R&D road and \$2.39M for the PCC training center road. The bonds will not be sold until Spring 2019, and Business Oregon is working with the City of Scappoose to figure out a way to get the project done next year before this money is in hand.
- In addition, OMIC is listed in [HB 2017](#) (p. 77) as a project to be funded with Region 2's portion of the transportation bill funding. As yet, we don't have any specifics on how this might be used or how much might go to OMIC other than to say that the bonds apparently wouldn't be sold until 2021.

Building Funding. \$3,875,000 in general fund obligation bond money was allocated to HECC for OMIC ([SB 5505](#) p.3). This appears to be one-time funding. At this point, we believe based on negotiations with HECC that we can spend and charge back to this bond, but the funds are not available until Spring 2019 when the bond is sold.

OMIC R&D has biennial State support of **\$6,600,000 for operations** and **\$4,875,000 for capital**, for a **total of \$11,475,000**.

1.3 Board of Governors' strategy

In June 2017, the Board of Governors identified key short-term strategies to inform the work of the OMIC R&D for its first 6 month period, from July through December 2017. These divided into 6 work streams as follows:



Based on this direction from the Board of Governors, Oregon Tech, as Host, produced a Launch Plan for execution.

Key results for this Launch period include:

- **Preparation for the long-term: strategy and business plan.** The key to accessing the remaining operational funding is the delivery of a 3-5 year strategy and business plan for OMIC R&D, that leads to sustainability of the enterprise.
- **Clarification of decision authorities and accountabilities.** This is being captured in governance documents, including the structure of the OMIC Technical Board (TB), University Partnership Council, executive roles on the OMIC R&D Board of Governors.
- **Pilot projects and value proposition.** The Technical Board will complete its work in specifying projects; the Board of Governors will approve funding and project scope; and the Host will ensure that the approved projects have contracts for funding. Basic improvements to the Scappoose site will be made to support project work.
- **Site plan and operations.** A comprehensive site plan covers all aspects of the Scappoose operation, including floor and office configuration and use. Site operations will commence, and implementation of site plan recommendations will be addressed through immediate or longer-term planning. Equipment will be received, and initial technician staff hired and trained accordingly.
- **Members and equipment.** Business development for membership recruitment is happening based on industry relationships.
- **Marketing.** A communications plan is developed emphasizing a bank of key messages by audience prior to rolling out significant web or social media presence. Website, social media and promotional materials are being developed.



- **Infrastructure upgrades. Occupancy and annexation.** To accommodate equipment installations and initial projects on the site, infrastructure upgrades are being planned and implemented as necessary to meet urgent deadlines.

2 OMIC R&D: Oregon Tech's roles and success criteria

Oregon Tech plays 3 distinct roles with OMIC R&D:

1. Research partner
2. Host
3. Landlord

Each of these roles comes with a set of success criteria and risks.

2.1 Oregon Tech: Research partner

As one of the members of the OMIC R&D, Oregon Tech enjoys select status for bidding on applied research projects proposed by industry members. These projects include both **general projects** that are funded from the yearly dues and **specific projects** that are done for a single industry member with additional investment. Oregon Tech also gains access to the equipment and staff of the OMIC R&D in support of project execution.

Success as a research partner is measured by:

- **Projects undertaken and successfully completed**, including both financial scope and breadth of technical capability involved.
- **Access to state-of-the-art equipment and staff** otherwise unavailable to faculty and students of Oregon Tech.
- **Financial support** provided to Oregon Tech students working on research projects.
- **Growth in reputation** as evidenced by inclusion on other grants or projects outside of OMIC R&D and in increased ability to recruit faculty and students.
- **Development** of other university, foundation or student support revenue streams in support of OMIC R&D outside of applied research.

Projects. Oregon Tech is a contributing institution to three pilot projects. Total funding for the projects to all three universities is \$189,050:

- Precision hole drilling
- Rapid prototyping
- Machine dynamics testing

More general project funds are available, and Oregon Tech is aware of specific project opportunities.

Equipment and staff. OMIC R&D has been successful in soliciting equipment and personnel donations from both members and potential vendors. As examples, these include a \$2.5M WFL M80 Millturn, which is on loan to OMIC R&D for the next two years. Other significant machines are in the plan. Hangsterfer's has donated the lubricant system and green lubricants, consistent with Oregon's focus on sustainable manufacturing. OSG is providing a full time Engineer or Coating Specialist to OMIC R&D, along with coating furnace and cutting tools. Oregon Tech has also located \$100,000 of equipment funded by a NWCSM grant at the OMIC R&D site. These include metrology and basic tooling support items. Many more items have been donated, most of which are either state-of-the-art machinery or basic tools.

Growth in reputation. Progress to date includes hiring 4 new faculty members to the Portland metro campus in mechanical engineering. Bios for these faculty are included in the Appendix.

- Dr. Mike Myers
- Dr. Rob Paxton



- Dr. Cliff Stover
- Dr. Mostafa Saber

For each of these hires, the OMIC R&D was a significant attraction in coming to Oregon Tech.

With the addition of Japanese firms as members, and our global launch partners, OMIC R&D is getting widespread attention.

Development of revenue streams. The machine dynamics project will build capability within Oregon Tech for consulting with small and mid-sized businesses on machining, providing both industry value and student work opportunities. In addition, we are pursuing other opportunities such as writing a grant with Oregon Storyboard to bring AR/VR technology to OMIC R&D and into the classroom. With deep VR technologies, we may be able to generate other revenue streams that bring industry value in laying out factory or machine floors.

Risks for Oregon Tech as a research partner:

- Not being able to compete effectively with our larger research partners to garner sufficient opportunity for work. This is somewhat mitigated by the industrial experience of our faculty, which makes them well suited to applied research work and more in tune with industry's needs and pace. Institutional emphasis on the value of applied research work will help motivate additional faculty participation.
- Slow or no growth of the OMIC R&D. If new members are not solicited, or if existing members are not finding value from the applied research projects, OMIC R&D may falter.

2.2 Oregon Tech: Host institution

As the institutional Host for OMIC R&D, Oregon Tech bears accountability for the operations and staffing of OMIC R&D, and for fulfilling the strategic aims of the Board of Governors.

Success as the Host is measured by:

- **Capability to run an operational applied research site** that meets industry standards and operates to member expectations.
- **Solid and continuing state financial support as a contributor to operations.**
- **Satisfied Board of Governors.**

Capability. Key to the long-term success of Oregon Tech as the Host will be the hiring of a Center Director who can lead OMIC R&D. Oregon Tech is in the search process for this director, and the search committee comprises industry, government and Oregon Tech representatives.

Oregon Tech is already developing internal capabilities, as the Wilsonville Lab Director is learning from the AMRC and from our consultant (retired Boeing project manager) about how industrial sites operate and how to bring those standards into OMIC R&D. This includes the targeted AR/VR capabilities that are being targeted. Oregon Tech will be hiring a shop foreman, who will be trained on the state-of-the-art equipment and responsible for the overall operations of the factory floor in Scappoose.

Internally, Oregon Tech back office and facility support have been taking on new kinds of efforts, and overall the response has been positive.

Financial support. Due to the extensive efforts of our industry partners, and the effective collaboration with Sen. Betsy Johnson, OMIC R&D was able to get substantial support from the State of Oregon for both operational and capital needs. In addition, we have submitted an EDA (Federal Economic Development Agency) grant proposal for an additional \$3,000,000 of matching funds for infrastructure development. We will hear back by March 2018 on this grant application.

Finally, the State of Oregon is looking for additional support for road construction, above and beyond the allocation already noted.



Satisfied Board of Governors. Oregon Tech just completed the first quarter of performance as the Host, and is conducting a review with each of the Board of Governors members to assess satisfaction. A report on progress will be available by January 2018.

Risks for Oregon Tech as the Host:

- Pace of capability development to support OMIC R&D is too slow against industry expectations.
- Long term sustainability of OMIC R&D.

2.3 Oregon Tech: Landlord

As the landlord, Oregon Tech cares for the development of the property and on-going property management.

Success as the landlord is measured by:

- **Sound capital investment.** All improvements accrue to the value of the property. Within 10 years, the state will relinquish its claims on the property based on its \$2.5M investment. Oregon Tech will then own a commercial site in a growing area within the urban growth boundary.
- **Operational funding covered by membership commitments from OSU/PSU.** The member dues from our sister research institutions cover the basic costs of operating the site.
- **Responsiveness to OMIC R&D needs.** Oregon Tech should be developing its site in support of the long term direction of OMIC R&D.

Sound capital investment. To date, OMIC R&D will garner the benefits of the infrastructure improvements funded by the bonds, including the road, annexation and access to City of Scappoose utilities, and building improvements for ADA compliance, occupancy improvements, and building upgrades to support the advanced manufacturing machinery and projects.

Operational funding. For the first two years, we have \$200,000 guaranteed from each partner university: Portland State and Oregon State. We are able to support the operations of the site well within this funding level. We have a commitment from Oregon State through year 5 at \$100,000 per year. Should Portland State decide not to continue, they would not be liable for the \$100,000/year, but also would no longer be eligible to compete for research business.

Oregon Tech will be able to recoup the costs from the initial period prior to membership (Nov 2016-June 2017) of approximately \$57,000.

Responsiveness. Current efforts focus on the needs for site readiness to support incoming equipment and projects.

Risks for Oregon Tech as the landlord:

- OMIC R&D ceases to operate. Should this happen, Oregon Tech is free to put the site up for sale, or operate under its own money as a research resource.

3 Status: OMIC R&D Launch Phase

Key milestones (noted earlier) for the launch of the OMIC-R&D are:

- **Preparation for the long-term: strategy and business plan.** The key to accessing the remaining operational funding is the delivery of a 3-5 year strategy and business plan for OMIC R&D, that leads to sustainability of the enterprise.
- **Clarification of decision authorities and accountabilities.** This will be captured in governance documents, including the structure of the OMIC Technical Board (TB), University Partnership Council, executive roles on the OMIC R&D Board of Governors.
- **Pilot projects and value proposition.** The Technical Board will complete its work in specifying projects; the Board of Governors will approve funding and project scope; and the Host will ensure that the approved projects have contracts for funding. Basic improvements to the Scappoose site will be made to support project work.
- **Site plan and operations.** A comprehensive site plan to cover all aspects of the Scappoose operation, including floor and office configuration and use. Site operations will commence, and implementation of site plan recommendations will be addressed through immediate or longer-term planning. Equipment will be received, and initial technician staff hired and trained accordingly.
- **Members and equipment.** Business development for membership recruitment will happen based on industry relationships.
- **Marketing.** Communications plan developed that will emphasize a bank of key messages by audience prior to rolling out significant web or social media presence. Website, social media and other materials developed.
- **Infrastructure upgrades. Occupancy and annexation.** To accommodate equipment or initial projects on the site, infrastructure upgrades will be planned and implemented as necessary to meet urgent deadlines.

Additional milestones include:

- **Long-term projects.** Using the technology roadmap, the next phase of general projects will be outlined, and funding strategies defined. In addition, a Charter and Tech Board book will be developed for the TB with operating policies and procedures. This will include an equipment and facility improvement recommendation process. Finally, the project oversight lifecycle will be defined, including performance metrics and approach for reviews. This will have a bearing on how the Host releases funds under task orders based on project proposals.
- **Long-term revenue streams.** Additional revenue streams to support OMIC R&D applied research work should be identified, and the grant or fee-for-service approach defined. This will be part of the 3-5 year strategic plan.
- **Technology roadmap.** A refresh of the technology roadmap to support the work above will be completed. A general lifecycle for the technology roadmap needs to be defined and included in the Board book.
- **Scappoose project support.** Requirements for project work at the site will be identified and plans developed to support that work.
- **Partners.** Key partnerships will be identified, and for OMEP, a strategic partnership MOU will be pursued.
- **Back office operations.** All back-office systems should be functioning, and in continuous improvement as they are used.
- **Back office staffing.** Key roles will be identified (e.g. technician, site planner) and staffed according to the approved budget.
- **Property management.** Scappoose site will be managed by Kidder Mathews. All standard full gross services will be maintained.
- **Sales support.** The information structure of the CRM is critical to ensuring that the system is usable for a variety of purposes. Information will be maintained in spreadsheet format until both the information architecture and the use cases for the CRM are defined. These will then be used to select an appropriate platform.
- **Site readiness.** Site readiness has been assessed for immediate needs, and plans for changes are in place. Goal is to support the pilot projects and arrival of confirmed equipment. The development of a model for on-going readiness evaluation for new equipment and projects will be developed to assist the TB in making recommendations.



3.1 Key milestones for January 2016-November 2017

- **Pres. Maples visits AMRC.** First introduction to the initiative and the potential as shown by AMRC. **January 2016.**
- **State of Oregon allocates \$2.5M for OMIC R&D property acquisition.** Short session provides \$7.5M, of which \$5M goes to OMIC Training and \$2.5M to OMIC R&D. **March 2016**
- **Oregon Tech submits contract to purchase Scappoose site.** Oregon Tech provides \$1.7M to combine with the State's \$2.5M to make a purchase offer. **May 2016**
- **Purchase of Scappoose site.** Closed on the purchase of the property in Scappoose. **November 2016.**
- **Parker donation of easement and construction of temporary access road.** Neighbor Scott Parker donates the land for a road easement to the OMIC R&D site, eliminating the need to transit the gravel quarry. Temporary road is constructed. **Spring 2017.**
- **Oregon Tech selected as Host institution.** Oregon Tech assumes the responsibility as the Host institution, based on a vote of the existing launch partners. **May 2017.**
- **Collaboration Agreement.** 10 launch partners sign collaboration agreement. **June 2017.**
- **State of Oregon legislative support.** Significant operational and capital support provided to OMIC R&D. **July 2017.**
- **Launch Plan.** Based on the Board of Governors' input, a 6-month launch plan is developed to achieve immediate goals. **August 2017.**
- **7 new industry members.** As of December, 7 new members have joined or are ready to join. **December 2017.**

3.2 Planned results for December 2017-March 2018

- **Annexation.** All gates have been passed, and we expect approval of annexation. **December 2017.**
- **Shop foreman hire.** On site expertise to handle logistics, safety and machine operation. **January 2018.**
- **3-5 year strategy.** Collaboratively with stakeholders, a 3-5 year strategy is in place with the goal of sustainability and value. **February 2018.**
- **18-month contract with Business Oregon.** Based on the 3-5 year strategy and 18 month plan, sign a contract with Business Oregon for the remaining operational support. **February 2018.**
- **Center Director hire.** Leadership in place for the long term. **March 2018.**
- **Delivery/deployment of WFL M80 machine.** Delivery of first significant machine to the site. Expected to be ready for operations. **April 2018.**



4 Oregon Tech Academic Programs

4.1 Mechanical and Manufacturing Engineering

Oregon Tech has two disciplines that will be offered in the Portland metro area and augmented by the OMIC in Scappoose: Manufacturing and Mechanical Engineering. We expect to deliver didactic portions simulcast between the two sites so that students can attend classes at either location. Labs will be conducted at the most appropriate facility.

At this time, we offer manufacturing engineering technology. In the near future, we plan on full Mechanical Engineering at the Bachelors level and a restart of the Manufacturing Engineering program at the Masters level. ABET accreditation by extension is underway, equipment is funded and purchasing/acquisition for the Wilsonville campus is proceeding, and we now have a full complement of faculty to provide the program.

Our BSME will be offered in the metro area under an MOU with Portland State University, where we offer nights/weekends programming and they offer daytime programming. We also commit to encouraging our post-baccalaureate programs to matriculate to PSU's Masters in ME program.

Oregon Tech also has an approved MS in Engineering, which we may configure to offer niche degrees that address cross-discipline areas related to solving problems for our manufacturing base.

The Wilsonville campus machine room had insufficient ventilation and space to support a full program, and equipment has been moved to Scappoose. Access to equipment and project space for work in the Wilsonville area is underway.

As is done at the OIT-Seattle site to support their similar degree programs, we hope to lease large welding/machining capabilities from local community colleges, most likely PCC, to support our courses in those areas. Ultimately the OMIC PCC Training Site should be able to support this work, especially as the apprenticeship program is a days-only program, and nights, Fridays and Saturdays should have equipment available. There are other PCC campuses with sufficient equipment to make this possible in the interim.

For our machining equipment, we are seeking a local partner in Wilsonville with sufficient high bay space that could host our capabilities in the next year, and possibly beyond. This would be an external lab site for the Wilsonville courses, and might have a full suite of advanced equipment such as OIT-Seattle has in their own facility. It does not require a substantial footprint to be a viable lab facility.

New enrollment in the current manufacturing program is languishing due to insufficient faculty time for both recruiting students and maintaining the offerings. In general, having two or fewer faculty members does not create ideal conditions for full program execution. We expect to see an uptick in our applications and enrollments once the OMIC is seriously underway.

There is substantial demand in the metro area for a nights/weekends BSME. In addition, our local Wilsonville industry also has demand for specialists in manufacturing, and we expect that contacts through OMIC may result in the identification of additional demand.

The co-located PCC apprenticeship program should provide a natural pathway and connection to students with aspirations for full engineering degrees.

Finally, the industry partners of the OMIC will have continuing education needs, and there is a great opportunity to offer short courses on the distinguished equipment expected to be housed at OMIC.

Models that show profitability of the program after 2-3 years have been developed. However, the modeling depends in large part upon the hiring timelines for the faculty, the applied research success for faculty and the types of offerings we can provide to industry in a shorter timeline.

4.2 Management

OMIC provides additional strategic opportunities for our BAS in Management and Operations Management programs.

Since the PCC Training facility will be granting apprenticeships, the graduates should be eligible to enroll in Oregon Tech's Bachelors of Applied Science in Business. This degree is tailored to graduates with two-year terminal technical degrees; it is ideally suited for connecting with those who aspire to a BS degree for career reasons. This is will be a unique offering in the state of Oregon.

Having a site in Scappoose with the same simulcast capabilities as Wilsonville opens up another region for access by place-bound students.

In addition, this facility provides a learning environment for our Operations Management students, perhaps for capstone projects.

5 Future

The next update to the Board of Trustees would be appropriate after the OMIC R&D completes its strategic planning and 18-month operational plan, sometime in the first few months of 2018. At that point in time, there will be substantially more detail to inform sustainability and risk for the enterprise. If the Board would like, another written report can be prepared, either with or without a full presentation.

Oregon Tech staff and faculty look forward to growing into each of the three roles, and to being an excellent partner in this broad enterprise. The continued oversight and guidance from our Board of Trustees is an important aspect of the growth, as we need to draw on industry expertise and perspective. We must strive as well to maintain good fiduciary controls and manage risk on behalf of the institution.

6 Appendix: Faculty Bios

Robert Paxton, Associate Professor

Manufacturing and Mechanical Engineering Technology

Robert moved to Oregon in 2015 from the Land of the Long White Cloud (also known as New Zealand). He obtained his bachelor's degree in physics from the University of Waikato, and his master's and doctoral degrees in mechanical engineering from the Auckland University of Technology. After spending a few years in industry, Robert returned to academia to teach engineering to aspiring young engineers. During this time Robert has also served on numerous academic committees and held service positions such as Program Leader for the Bachelor of Engineering Technology (Mechanical) at AUT. He has also served as an international accreditor for university mechanical engineering programs helping to ensure the continuing quality of engineering education.

Mostafa Saber, Associate Professor

Manufacturing and Mechanical Engineering Technology

Dr. Mostafa Saber earned his Ph.D. in Materials Science and Engineering from North Carolina State University in 2013 and then served as a postdoctoral research scholar at the same university for two years. Before he joined Oregon Tech, Dr. Saber served in the Department of Mechanical and Materials Engineering at Portland State University as a research assistant professor for more than two years since 2015. Prior to his Ph.D., Dr. Saber spent 10 years in metallurgy industries on casting and heat treatment design of tool steels, stainless steels, high-temperature steels, aluminum alloys, and magnesium alloys. His research currently focuses on advanced alloy developments, mechanical behaviors of materials, and new generation of materials for cutting tool applications.

Clifford Stover, Associate Professor

Manufacturing and Mechanical Engineering Technology

Cliff was born and lived most his life in Southern California. He took 14 years to earn his mechanical engineering degree while working full time as a mechanic, machinist and mold maker. After earning his master's degree and working as a design engineer, he was hired by Cal Poly Pomona as both professor and engineering director for the project and development laboratories. Cliff was advisor for both Formula and Baja SAE and brought his teams to 72 events all over the United States and Canada as well as international events in Italy, Germany, and England.

Cliff is a licensed registered Professional Engineer (PE) in CA, MA, OR, PA and FL and has 30+ years of experience in the design, manufacture, analysis, testing, and inspection of mechanical systems, being involved in a wide range of projects including accident reconstruction, failure analysis, patent infringement, and product liability.

Mike Myers, Associate Professor

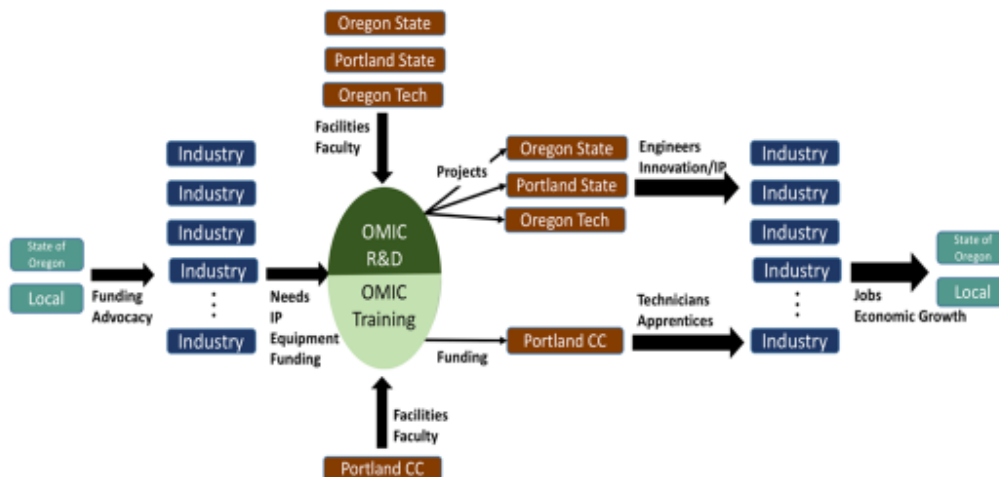
Manufacturing and Mechanical Engineering Technology

Mike grew up in southwest Kansas and started as a soda jerk for the family business when he was 10. He progressed to overhauling engines, delivering milk in a standup drive manual transmission truck, and expanding the business into packaged ice. He then pursued the B.S. degree in Aerospace Engineering at the University of Kansas. Mike joined the U.S. Air Force where he tested bombs, missiles, and aircraft avionics in Florida. Beaches, sailboats, and fresh seafood became popular indulgences as this Kansas boy embraced Florida's offerings. He left the Air Force for Colorado to work in ballistic missile defense, while starting and running a popcorn business.

Yearning for the academic environment, Mike decided to pursue the Ph.D. in Mechanical Engineering at Vanderbilt University in Nashville, Tennessee. He then spent four years at Vanderbilt teaching engineering and computer science while performing research in metal additive manufacturing, virtual prototyping, finite element analysis, computational fluid dynamics, and thermal analysis. He also led and conducted evidence-based teaching workshops, teaching as research, learning communities, learning through diversity programs, and mentoring programs.



How does OMIC work?

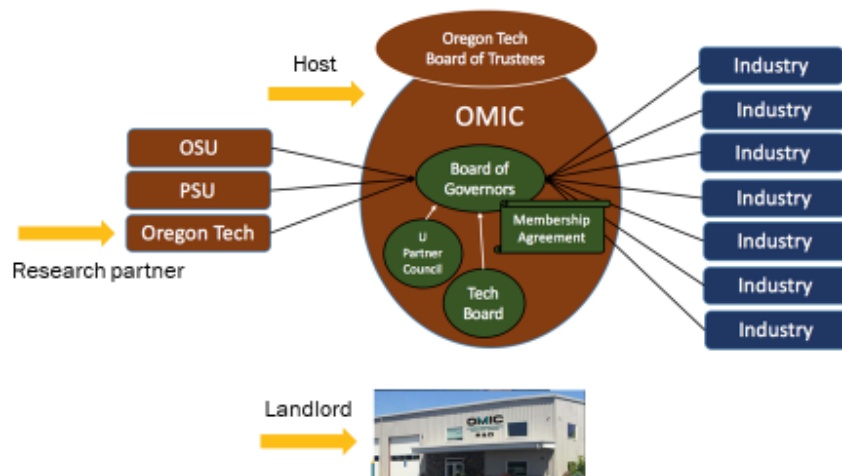


The OMIC value chain

True public-private partnership



How does Oregon Tech participate?



So where are we now?



- OMIC R&D has made significant and rapid progress.
 - ✓ **Building** acquired, occupancy done, and annexation pending.
 - ✓ Temporary **road constructed**, permanent road funding allocated and project underway from the City of Scappoose (Sep 2018).
 - ✓ **Infrastructure** changes to support equipment and projects currently being bid.
 - ✓ Significant **State support** garnered for both operations and infrastructure.
 - ✓ **Collaboration agreement** signed; 10 launch partners and 6 new industry partners.
 - ✓ Significant **equipment donations** in the pipeline.
 - ✓ **Pilot projects** underway.
- Complexities remain.
 - Sizeable public-private partnership.
 - Expectations are high; this is not starting in the same way as AMRC.
 - Oregon Tech has taken on substantial additional responsibilities.



Oregon TECH
Board of Trustees



5

What does OT expect to achieve with OMIC?



Oregon TECH
Board of Trustees



What is happening now?

Launch Phase
July – December 2017



Questions? Thank you Board of Trustees!

