OMIC
OREGON MANUFACTURING INNOVATION CENTER
R & D

Date: **November 9, 2018**

To: **OMIC R&D Governing Board**

From: **Craig Campbell, Executive Director, Oregon Manufacturing Innovation Center – Research & Development**

Re: **Executive Director's Report for November Governing Board Meeting**

Contents

General Observations

The last month has presented several opportunities for growth. Although each of the opportunities that have arisen will require hard work and resources, they will, if developed, provide tremendous value propositions for OMIC R&D and our members. As always, the staff has performed phenomenally. Ally Imbody was able to travel to AMRC with Matt Carter and Keith Chapman as did Dr. Abdy Afjeh of Oregon Tech. The lessons they bring back will be helpful as we continue to develop our course moving forward.

OMIC Procedures (Policies)

As new opportunities arise we are often finding ourselves trying to make decisions on the fly without the benefit of clearly articulated procedures. These issues raise from funding decisions, to fee structuring, to Collaboration Agreement interpretation to how to keep the facility secure. In light of that, I would like to start bringing procedures to the Governing Board for consideration and if they agree, adoption. Such direction will make it much easier for staff to do the day to day job of running operations at OMIC and provide the Governing Board some assurance of predictability in how important matters are handled. As we are an entity that is legally indistinct from Oregon Tech, the Governing Board cannot adopt "policy". Only the Oregon Tech Board of Trustees can do that. As a result, we will be adopting "procedures" that will for all intents and purposes act as policies, but which do not affect the rest of Oregon Tech.

Pricing

The pricing structure for general projects is established through the General Projects Master Agreement and through the long-standing charging practices of OMIC's academic partners. However, OMIC needs clear, transparent and standardized procedures to deal with the variety of project types it is being asked to work on. The model used by the academic partners, including OMIC's host organization does not anticipate the use of equipment without accompanying personnel. OMIC must have established pricing procedures that are reflective of the following goals:

Provide pricing value to OMIC's industry members.

Provide pricing that:

- Is clear, transparent, easily understandable and justifiable
- differentiates between members and non-members and general and specific projects
- allows OMIC to recoup its actual costs for machine time
- aids in resolving the long-term sustainability of the center without doing so at the expense of our members.

Until we establish our own pricing procedures, we need to use Oregon Tech's established pricing structure which charges the fully encumbered salary of the staff involved in the project with an overhead charge equal to 50% of staff salary.

I will be recommending a pricing structure that charges for the hourly cost of staff fully encumbered, with the existing 26% of staff salary to cover the amount we pay to Oregon Tech for back office support,

plus an hourly rate for machine time to cover the costs of those operations (i.e. maintenance, power, etc.).

Sponsorships

We periodically get requests to sponsor events. Previously those requests would be handled by the 501(c)(6). However, since they adopted a clear sponsorship policy directed at supporting student education, the requests that otherwise would have been directed to them have been directed to us. Although in theory our funds are very flexible, they are still state funds and we should be cognizant of how every expenditure will be viewed by the legislature when we requesting continuing or additional funding. Having a clear direction regarding what kind of event, if any, OMIC would be interested in sponsoring, how much we are willing to spend, and what procedure should be used to evaluate such requests would be very helpful.

Access to the facility

With the level of contractor work on site, the arrival of high value tools and equipment, the commencement of operations raising safety concerns and the potential for proprietary research being done at the facility, it appears a prudent move to create an access protocol that identifies who is allowed access to what parts of the facility and when. We are developing an access protocol that will be submitted for review. It will likely include a proposal for on-site badging, though we do not have the ability for such badges to restrict access. They will serve primarily to inform visitors where they can and cannot go in the facility without accompanying staff.

Contracting

In an effort to professionalize the way we conduct ourselves, we have developed a contracting check list to make sure we are following state laws and Oregon Tech procurement procedures. Although in theory the Executive Director has primary responsibility for identifying scopes of work, acquiring contracting, and authorizing expenditures, it is not beyond the realm of possibility that staff could inadvertently give direction to a contractor and have the contractor act on the instruction outside of an existing contract. This is not something that the board needs to accept or adopt. It is an internal document to make sure we don't repeat some of the mistakes of the past where companies were charged with doing work without a clear executed contract and where required, BOLI compliant documentation. Oregon Tech has very clear, effective procedures. And the process for following those procedures has been swift and easy. It is just a matter of making sure all staff are aware of them.

Conduct at OMIC

We have a staff that is engaged, thoughtful, supportive and positive. We have worked hard to develop that culture through modeling behavior to exhibit how we approach our work at OMIC. However, as we add employees, it is important that we have clear expectations regarding how employees conduct themselves. It is better to establish these expectations with a staff that already exhibits them rather than wait until a problem arises. This is another circumstance where the board will not need to take action, although it will be beneficial to have feedback on how they have established the work culture in their facilities. OMIC is likely unique in how it operates, but we also believe in learning from others to avoid mistakes of our own.

We have included the following in our job postings as desired attributes and as an expectation of conduct while working at OMIC:

- Optimistic and upbeat
- Customer service approach to our work
- Able to work well with others in a collaborative setting
- Willing to demonstrate a sense of calm and inspire confidence in others and remain positive in a high-pressure environment
- Courage to ask question that need to be asked and to freely contribute ideas as well as openly consider the ideas of others even when they may disagree with your own.
- Able to engage in problem solving in a creative and responsible manner with a flexible approach and positive attitude.
- Able to adjust quickly and positively to change.
- Able to self-initiate and comfortable with decision making responsibility and authority and willing to take ownership of issues.
- Coachable and not afraid to embrace new opportunities for professional growth.

Special Projects Master Agreement Discussion

It is critically important to the long-term success of OMIC R&D that our industry partners be willing to bring forward specific research projects, that our academic partners be willing to conduct that research and that the process for doing so be swift and simple. Following the August Governing Board Meeting, it was determined that a deliberative process would be helpful in resolving concerns regarding the treatment of IP in conjunction with special projects.

We had an initial discussion at the UPC meeting on Oct 16th about what process would take place to identify industry and academic issues surrounding the disposition of IP associated with Special Projects and how the Special Projects Master Agreement can alleviate those issues. The starting premise is that there is a provision in the Collaborative Agreement regarding special projects, but that for special projects agreements to be readily and swiftly executed, there are issues that need to be addressed.

The Discussion has been broken into three distinct steps. The first step, which is now complete, is to identify key issues of concern through direct discussions with individual academic and industry members of the work group. Following that, I will develop a "crosswalk" to identify issues where there is apparent agreement or where there is no direct concerns, as well as identify those issues where there needs to be further discussion to resolve challenges. The third stage is to get the group together to identify the vehicle to encapsulate the final work product as well as work through areas of concern. The final step will be to present a plain English set of recommended resolutions to the Governing Board for review and input.

Once concluded, any legal documents can be prepared based upon the plain English direction developed through this process.

Update on Construction Projects

OSG Rooms

The OSG equipment has been installed in room 112A and B and is now powered and operational. Internet capability has been established between the East side and the West side of the facility to enable internet connection with rooms on the East side to facilitate the completion of the machine programming and to allow future updates to be installed. In addition, the HVAC to the rooms are now

under power. I am happy to say we are finally getting close to completing these upgrades. The remaining elements are the installation of a manual fire alarm and the installation of fire doors to replace the existing doors to those rooms.

Power to the High Bay

The main gear has arrived on site, the pad for the main gear has been poured, the electrical conduit has been laid to connect the main gear to the transformer. We are taking the opportunity to lay piping for the air compressor installation while the trenches are open to avoid the higher cost of that installation later on. In addition, the posts for the cable trays have arrive and the holes have been marked for mounting those posts. Christenson continues their installation work and hopes to complete all of the work that can be done in advance of the high bay and half bay wall installation by the end of November.

High Bay Shipping and Receiving Wall and Half Walls

The RFQ for construction of the High Bay Shipping and Receiving Wall and Half Bay Walls was posted and but the lowest of the two bids came in at double the budgeted amount. We are making inquiries for a redesign for a half wall. It will not provide the climate control but will allow us to maintain the shipping receiving bay shelving and avoid the additional cost of moving the breaker panels to the West wall.

Request for funds to install external staircase from the second-floor large conference room

Should the OMIC 2nd Floor Large and Small Conference Rooms be inspected by the Fire Marshall for an Occupancy allowance, we would be severely limited in our ability to hold meetings in those spaces. The primary restriction on the potential occupancy allowance is the absence of a second means of non-powered egress from the second floor.

I will be requesting budget authority in the amount of $21,500 from reserve for purposes of installing an external metal staircase and exit door from the large conference room. The amount is derived from the following budget:

Staircase:	$10000
Shipping:	$3500
Installation:	$1500
Door Installation:	$1500
Concrete Pad Installation:	$2500
Design for Pad	$500
Contingency:	$2000

Charles T. Parker Way

Construction on Charles T. Parker way is in full swing. There was a change order resulting from changes to the Pumping station that were not known when the road design was completed. Oregon Tech/OMIC is contractually obligated for any additional costs associated with the project as we will be provided reimbursement for such expenditures once the bonds dedicated to the project are sold. That bond sale is not expected until 2020. The change order had an additional cost of $65,824. Also, following

discussions with Northwest Natural Gas, it was decided to place gas piping under all of the crossings before they are covered with hard surface. This will allow the extension of natural gas along Charles T. Parker Way in a future date without requiring disturbance of hard surfaces. The cost of this change is de minimis as all of the piping is provided by Northwest Natural free of charge and the trenching will already be dug to accommodate other utilities. Finally, the cost associated with the installation by Columbia County PUD of the base electricity system and street lights was not included in the original cost of the contract. That will result in an additional $84,000 cost. Although all expenditures made by OMIC on Charles T. Parker Way will be reimbursed to OMIC when the state bonds for the road are let in 2020, they do limit our contingency funds. I am making inquiries to Brian Fox to see if Oregon Tech has come capacity to provides bridge coverage for additional overruns.

EDA Grant

The kick off meeting with the Economic Development Administration has taken place and the initial reports due on the 30th of October have been submitted. Oregon Tech has assigned a full team including the Project & Grants Office, the Budget Management Office and the Facilities Management Services and Capital Planning Office. They are well organized and have already developed an extensive calendaring and tracking tool for this grant. In short it is in very good hands.

We are currently seeking clarification from the EDA on whether we can use a CNGC (Construction Manager General Contractor to include the contractor in the design phase. However, that is only one of several options we will be reviewing as we develop the RFPs for the project.

The timeline for the design work is currently as follows:

- RFP Preparation completed and submitted to EDA for review – Friday, November 30, 2018
- Target Posting date for Design RFP – Friday, December 14th, 2018
- Mandatory walk through for prospective bidders – Tuesday, December 18, 2018 (I chose this date but will confirm availability for those who need to be on site for the walk through)
- Closing date for responses to RFP – Tuesday, January 8, 2019
- Bid Review Completion – Tuesday, January 15, 2019
- Draft Contract Completed and submitted to EDA for review – Tuesday, January 22, 2019
- Target Posting of Successful Bid - Tuesday, February 12, 2019
- End of Protest Period – Friday, February 15, 2019
- Design Firm Award – Friday, February 15, 2019

The matching bond funds will likely not become available until May of 2019 depending upon when the bond sales take place. We were able to get the bond designation changed from non-taxable to taxable to avoid restrictions on use by private entities. Since our work is essentially targeted at research on behalf of industry, that would have been a severe challenge. The Oregon Tech Budget Management Office moved quickly and effectively to make sure that issue was addressed with the Department of Administrative Services.

Road-mapping Session and Next Steps

We had an excellent turnout at the technical road-mapping session on 10/19, including 20 representatives from our industry partners, 6 from our research partners, and 7 staff members and facilitators. Our road-mapping specialists from Boeing are working with Ally to summarize all of the feedback we received on the preferences for future OMIC research priorities and transfer the key takeaways, recurring themes, and significant trends into a report we plan to share with the Tech board at their meeting on November 13th with a general report to Board of Governors at the November meeting. This report will also be the basis for the next round of discussions with our research partners to ensure that we have the necessary subject-matter expertise in our consortium, and that we are actively recruiting faculty and new members with interest and experience in these areas. We'll be revisiting the road map on a quarterly basis going forward to ensure that this living document is current and reflective of our evolving membership priorities and the latest technological advances.

New Machine Operator/Programmer Posted

The posting for the new Machine Operator/Programmer was posted on October 17th with a review date of October 31st. The interview process is completed, and two candidates were forwarded as potential hires. If the capacity challenges that we anticipate are realistic, we will need two additional floor technicians in fairly short order. Each hiring process takes a couple of months. Provided the Governing Board agrees, my recommendation is to hire both. Either one of these two candidates would come in well under budget, but it is possible to work through HR to allow us to hire both under the same recruitment It would require an increase in the monthly amount in the current budget line from $14,942 per month, to $19,016 per month but, the annual cost is actually reduced from $149,420 to $113,112 for the remainder of the fiscal year because of how late we are bringing them on. As an added bonus, Josh indicated that we can train one of them to do metrology prep, which is the most time-consuming part of the process, and use university PhDs to do specific Metrology work when it comes up until we are in a position to justify a full PhD for that purpose at OMIC.

I have started to look at our operations budget for the next fiscal year to determine if we can sustain both new positions. I am confident we can do so, assuming we get our full funding during the next session.

Departure of Chris Holden from OMIC Training

Chris Holden has elected to leave his position as Director of OMIC Training. His last day is November 14th. It is unclear at this stage who PCC will select to replace him though presumably it will be an interim appointment as they seek a permanent replacement. We will be working with Chris until his departure date to make sure that his good work is not lost. In addition, we are looking for an opportunity to keep him involved as we explore the broader work of filling the skills gap beyond the work done by PCC on the apprenticeship program. This also exposes the potential challenges associated with not having a formal relationship with PCC.

Knowledge Transfer Project

For OMIC to supplement the work done by Portland Community College through the Apprenticeship program, it makes sense to develop a robust training and knowledge transfer opportunity to existing industry employees. This project would include work being developed with Urmaze Naterwalla at Boeing to provide monthly Advanced Manufacturing Master Classes but would also seek to develop classes on a variety of advanced manufacturing skills, techniques and advancements on a regular basis as a means of up-training and retraining advanced metals manufacturing employees and as a revenue source for OMIC. To do so I am requesting budget authority in the amount of $75,000 as a baseline amount to develop the program. Funds would be used to contract for a person to develop and administer educational programming through OMIC for the remainder of the fiscal year.

In addition there is an opportunity to develop OMIC R&Ds ability to develop online streaming and pre-recorded trainings. I am awaiting a funding proposal on that aspect of the project and will bring it to the board as soon as it is available.

OMEP Federal Grant

The Oregon Manufacturing Exchange Partnership has been given a federal grant in the amount of $300,000 to hire a staff position for the next three years. They are interested in using this position as follows:

1. Developing value proposition for OMIC to attract and engage with Oregon's Small and Medium sized Manufacturers (SMM's)
2. Business development activities
3. Engage, promote and assist in developing "Pipeline Program" with industry (Grade school through PhD education and certification/accreditation programs, helping fill gaps and assisting in Hub connection points)
4. Integration of Industry 4.0 technology and education in OMIC program offerings

Conversations with OMEP are ongoing and it may be a way to bring them on as a Tier 2 partner.

Oregon Manufacturing Innovation District Kickoff Meeting

On Friday, November 9th, 30 community members including local government, local landowners, state agencies, utilities, Portland Community College, and OMIC R&D was brought together by brought together by the Columbia County Economic Team (CCET) to start discussions about how to proceed in the development of the Oregon Manufacturing Innovation District. The three-hour meeting included a presentation of case studies, a stakeholder roundtable, and a master planning exercise. The event demonstrated an excitement about the development of the area around OMIC and the willingness of stakeholders to develop a plan to proceed. The meeting was facilitated by AECom who has done development work for the AMRC.

OMIC R&D State Funds FY19 Billing Report as of September 30, 2018

Grant Agreement Amendment 4 Exhibit B- Budget; 2018-2019 Fiscal Year Budget		7-1-18 to 9-30-18 Expenses Billed	Previous Billed Amt	Fiscal YTD Total Amt Billed	Budget Remaining
A. Operations Budget					
Staffing	$ 968,708.00	$ 149,559.92	$ -	$ 149,559.92	$ 819,148.08
Supplies	8,400.00	1,372.52	-	1,372.52	7,027.48
Equipment	32,400.00	10,319.43	-	10,319.43	22,080.57
Communications	12,084.00	692.55	-	692.55	11,391.45
Professional Services	272,000.00	58,534.50	-	58,534.50	213,465.50
Marketing/Public Relations	33,900.00	6,377.02	-	6,377.02	27,522.98
Permits and Fees	300.00	858.06	-	858.06	(558.06)
Travel	27,000.00	7,708.26	-	7,708.26	19,291.74
		-			
Total Operations Budget	$ 1,354,792.00	$ 235,422.26	$ -	$ 235,422.26	$ 1,119,369.74
		-			
B. Capital / One-Time Expenditures Budget		-			
Software and Software Training	$ 202,000.00	$ 29,343.60	$ -	$ 29,343.60	$ 172,656.40
High Bay Equipment and Tools	902,000.00	173,430.01	-	173,430.01	728,569.99
High Bay / Factory Improvements	176,500.00	-	-	-	176,500.00
Facility Improvements	573,000.00	-	-	-	573,000.00
Office Area Improvements	46,000.00	-	-	-	46,000.00
Research and Innovation Development Pool	500,000.00	-	-	-	500,000.00
		-			
Total Capital / One-Time Expenditures Budget	$ 2,399,500.00	$ 202,773.61	$ -	$ 202,773.61	$ 2,196,726.39
		-			
C. Contingency	$ 546,976.41	$ -	$ -	$ -	$ 546,976.41
		-			
2018-2019 Fiscal Year Budget	$ 4,301,268.41	$ 438,195.87	$ -	$ 438,195.87	$ 3,863,072.54