



Business Advancement Team

Metals & Machinery Action Plan

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Photo credit Vigor Marine Group

Background

In April of 2023, The City of Portland and Prosper Portland adopted a five-year economic strategy.

The plan was titled Advance Portland: A Call to Action for Inclusive Economic Growth. Advance Portland is a collaborative strategy built through deep community engagement and is a roadmap to transform Portland into a thriving, inclusive, and sustainable 21st century city through robust partnerships with city bureau partners and community organizations.

Through community engagement and economic research into the industry growth potential of Portland's traded sector clusters (industries that sell goods and services outside the region), the Metals and Machinery industry was identified as a key industry in Portland with the potential to retain middle income jobs and foster inclusive growth.

Learn more about Advance Portland's goals, strategy, progress, and join the movement.

[Visit Advance Portland](#) →





About the Industry

About the Industry

The Metals & Machinery cluster in the Portland region has grown from its origins equipping the timber and shipping industries into a diverse field that serves everything from mining equipment manufacturers to aircraft component manufacturing. The metals and machinery cluster includes primary metals, fabricated metals, and machinery businesses. Along the supply chain from raw metal to parts and machines, a strong, connected metals and machinery cluster has the capacity to provide regional jobs and support multiple industries.

The automotive and aerospace industries are key markets, leading to innovation in lightweight composite, electric vehicle (EV) charging and precision machined parts. Advances in automation and smart manufacturing are increasing operational efficiency, which has also opened a market for robotics. However, the initial investment for these tools is costly, and a shortage of labor persists nationwide in the sector.

The Metals and Machinery cluster is divided into the following sub-clusters:

- Primary metals - the refining of metal ore or scrap metal.
- Fabricated metals - shaping, welding, and assembling metal into a finished product.
- Machinery - products that apply force, e.g., industrial or commercial machinery.
- Transportation Equipment Manufacturing - a subset of machinery; transportation equipment for road, rail, air, and water.

While the cluster's location quotient in Portland's decreased by 5% between 2010 and 2020, Portland retains a high concentration of jobs in this sector. Many of Portland's other clusters are dependent on a healthy metals and machinery industry, such as the fabricators of parts for electric vehicles and wind turbines in the Green Cities cluster.

Metals & Machinery anchor businesses in Portland include Vigor Marine Group, Gunderson Marine & Iron, Daimler Truck North America, WEIR Esco, Oregon Steel Mills, and AIMCO.

34k

Jobs in Metro Area

76%

Of Jobs Don't Need a Degree

\$75k

Wages

27%

BIPOC Employees

44%

Export Growth in Oregon over the past 10 years



Portland's Priority Industries

The five priority industry clusters - Athletic & Outdoor, Green Cities, Food & Beverage Manufacturing, Metals & Machinery, Software & Media - demonstrate economic strength and competitiveness in Portland, as well as future growth potential and opportunities to leverage inclusion and climate action goals.

	Economic Growth Opportunity		Inclusion Impact		
	LQ, MSA 10 year growth	LQ, County 10 year growth	LQ, County	% BIPOC	% < Bachelor's
Green tag equals:	strong growth		\$67K MSA avg.	>27%K MSA avg.	>60% Low barrier
Athletic & Outdoor	1.3 (-35%)	1.6 (10%)	\$82.7k	30%	71%
Metals & Machinery	0.9 (11%)	0.8 (-5%)	\$74.7k	27%	76%
Green Cities	1.2 (35%)	1.0 (35%)	\$93.8k	25%	67%
Food & Beverage Manufacturing	1.1 (28%)	1.0 (23%)	\$58k	32%	77%
Software & Media	1.1 (69%)	1.3 (117%)	\$129.1k	23%	51%

Industry Strengths



01 Highly Specialized Workforce

The Portland metro region is uniquely poised to take on many of the engineering and fabrication challenges in the growing aerospace and transportation industries due to our highly specialized workforce in metals, steel fabrication, and engineering. This ecosystem is bolstered by a strong university system that works closely with industry partners to offer engineering students hands-on experience.

02 Colocation of Industry Subsectors

The greater Portland area benefits from businesses working in semiconductor, aerospace, truck, and maritime fabrication. This enhances collaboration and positions Portland as a competitive region in fast-growing emerging technologies, such as robotics and electric vehicles (EVs).

03 Affordable West Coast Advantage

Portland is the West Coast's most affordable metro area, and Oregon ranks among the top states in the nation for electricity prices, infrastructure, and reliability, making Portland an attractive location for both businesses and professionals working in this sector.

04 Metals Innovation

The Oregon Metals Initiative, the Oregon Manufacturing Innovation Center, and Oregon State University's AI Program provide businesses access to expertise that will make them competitive in emerging technologies. The presence of these institutional research arms, coupled with the concentration of industries such as semiconductors, metals and machinery, and clean tech, supports Portland's competitiveness as a hub for metals innovation.

Industry Challenges



01 Cost Constraints

Cost challenges are eroding profit margins, particularly rising local and state taxes, utility and insurance costs, and tariffs. Businesses, especially those selling directly to consumers, must compete with businesses operating in lower cost areas of the country.

02 Lack of Access to Local Suppliers

Businesses are becoming more reliant on out-of-market vendors as local suppliers diminish, which negatively affects lead times and overall costs.

03 Capital Investment Barriers

While innovation and technology adoption are seen as vital for enhancing efficiency and market access, capital investment barriers prevent businesses from taking advantage of these opportunities.

04 Insufficient Industrial Land Supply

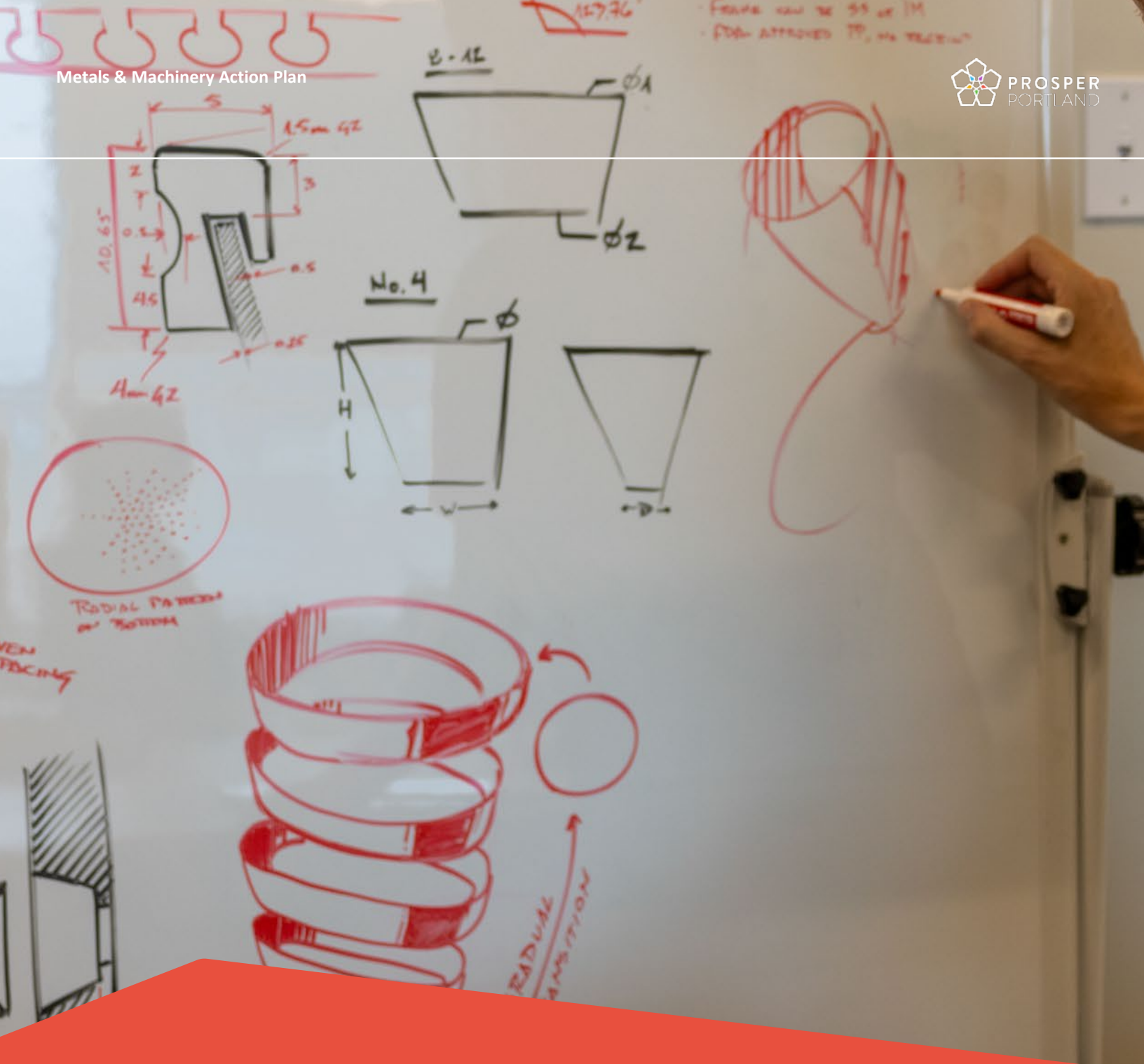
The Portland region has a limited supply of industrial land, marked by smaller parcels, high brownfield remediation and site development costs, and low turnover. These limitations make expansion and relocation efforts a challenge for Portland businesses looking to expand and for new businesses looking to locate in the region.

05 Permitting Challenges

Manufacturers perceive lengthy local permitting timelines and state and local regulatory requirements as a significant hindrance to growth.

06 Talent Recruitment & Employee Retention

Recruiting new talent and employee turnover are ongoing challenges, as businesses require a skilled workforce in a competitive environment.



Findings & Recommendations

Findings & Recommendations

To support this competitive industry, Prosper Portland should help “fill in the gaps” of available resources that businesses need, specifically focusing on support areas that are not currently being provided by community partner organizations. Across all businesses, livability issues, and in particular public safety and break-ins, were raised as key concerns for the industry. This is outside of the scope of the Cluster Action Plan, but worth noting as it creates a key barrier to growth. Findings and recommendations for inclusive growth for Metals & Machinery companies span the categories outlined below.

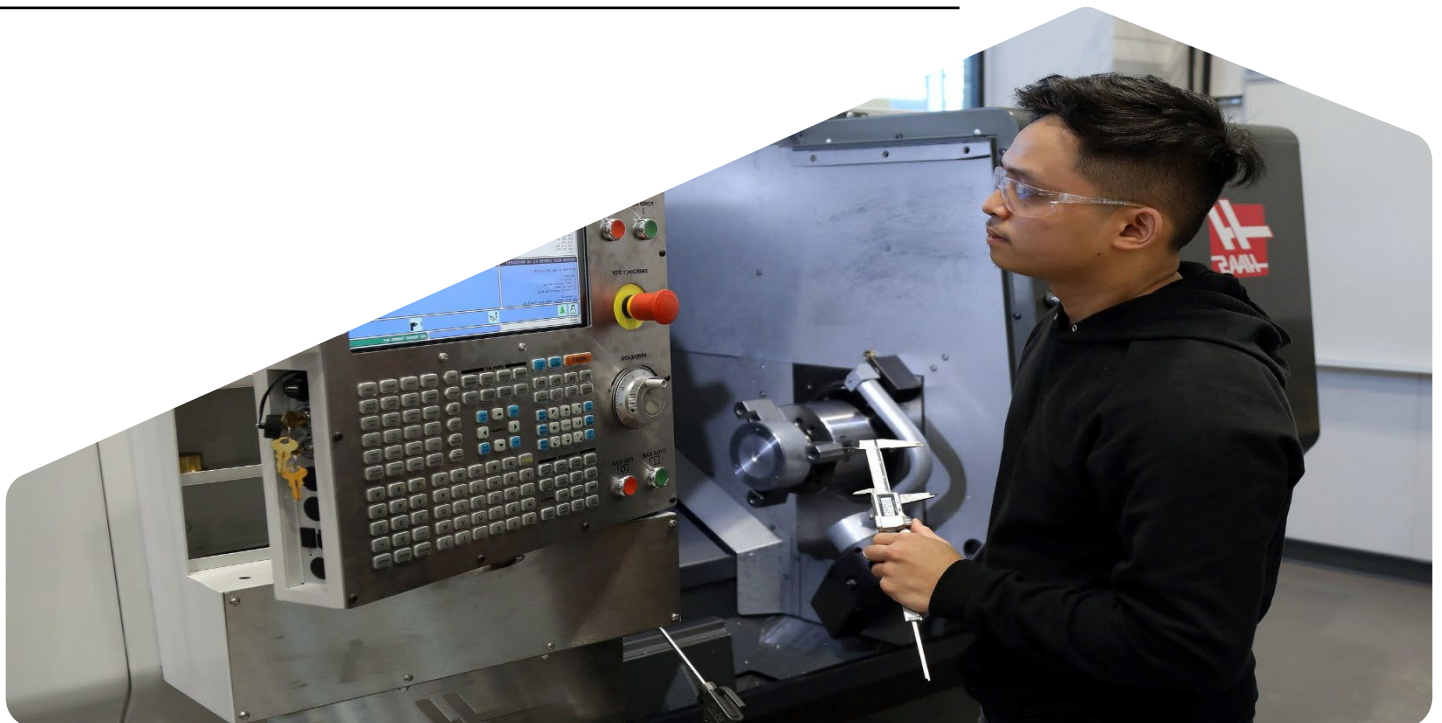
Facilitate Access to Capital

Assist in Expansion to New Markets

Cultivate Workforce Connections

Support Industry Networking, Collaboration, and Advocacy

Improve Access to Industrial Land & Manufacturing Space



Facilitate Access to Capital



Findings

01 Capital for Equipment Upgrades

While several grant and financial programs are available through Prosper Portland, they may not be sufficient to meet the more capital-intensive needs of businesses, particularly for major building maintenance or equipment upgrades.

02 Resource Awareness

Businesses are often unaware of the array of federal, state, and local resources available to them.

Recommendations

01 Metals & Machinery Liaison

Maintain funding for the Metals & Machinery industry liaison to support businesses with retention, expansion and recruitment.

02 Identify and Promote Available Resources

Join other public and private partners in promoting an array of private and public financing, tax abatement, and grant programs for manufacturers regionally. This includes the development of a comprehensive resource list specific to manufacturers regionally.

03 Loan Guide

Develop a loan guide in partnership with Prosper Portland's lending team to expediate loans for manufacturers wanting to purchase equipment or adopt new technologies.

04 Close Lending Gaps

Develop relationships with lenders who make equipment loans to uncover lending gaps and to find loan products adapted to manufacturers' needs.

05 Energy Efficiency Grants

Identify and offer energy efficiency funding mechanisms that could assist with green building and equipment upgrades.

Expansion to New Markets



Findings

01 Turbulent Trade Landscape

Uncertainty in international markets is creating new barriers to international trade for businesses. As a result, businesses are prioritizing finding new leads and diversifying their product lines in response to the turbulent international trade landscape and tariffs on steel.

02 Lack of Connections to Funding

Businesses can access funding for research and product development in partnership with research institutions, but many businesses need assistance to make these connections.

03 Opportunities for Efficiency

Businesses need to be as efficient as possible to be cost competitive, retain current customers, and access new markets, particularly with current cost constraints.

Recommendations

01 Expansion into Emerging Markets

Collaborate with the Green Cities industry liaison to identify opportunities for Metals & Machinery businesses to expand into emerging markets such as mass timber and battery storage.

02 Engage in Industry Events

Participate in national manufacturing networks to identify market trends and opportunities for Metals & Machinery businesses. Find new national and international leads and assist businesses in accessing new geographical markets and distribution partners.

03 Connect to Local Universities

Build relationships with local universities and national labs that can help businesses develop new processes.

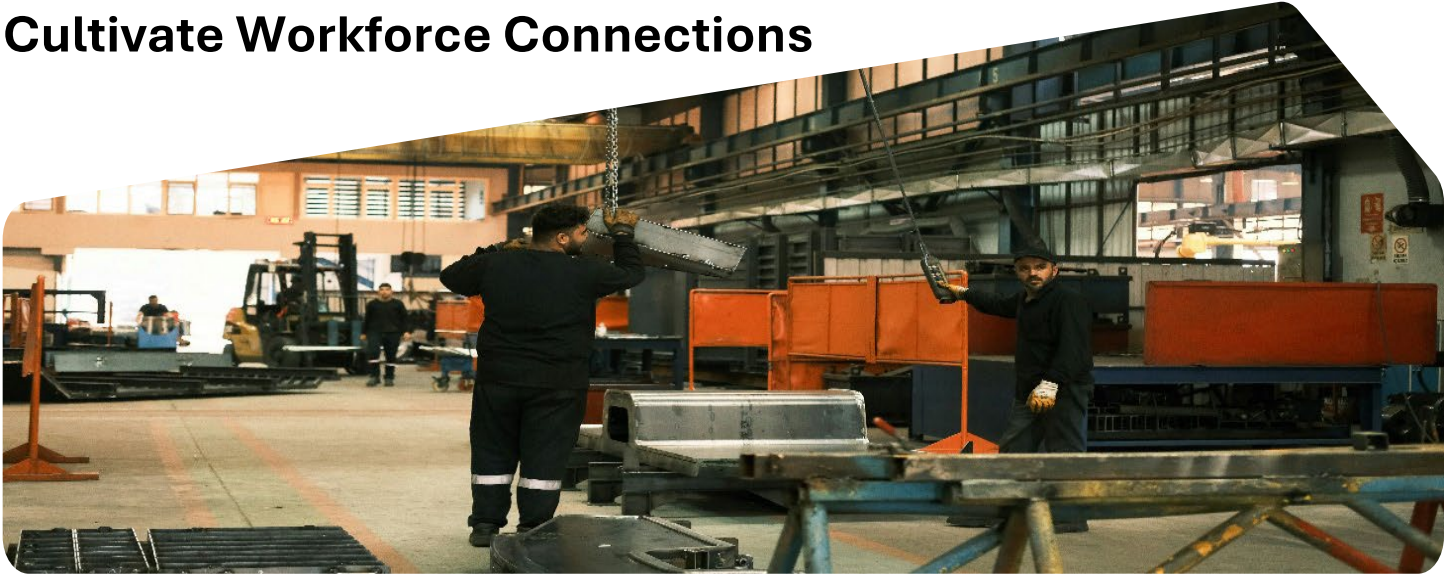
04 Provide Export Support

For Metals & Machinery businesses who are considering exporting outside of the United States, connect them with US Commercial Services (USCS) and Business Oregon to access trade show grants, connections to international trade partners, and other interventions to support exporting.

05 Lean Manufacturing

Connect businesses to the Oregon Manufacturing Extension Partnership to increase operational efficiencies, create and implement business strategies, and address workforce challenges.

Cultivate Workforce Connections



Findings

01 Complex Workforce Ecosystem

Employers have difficulty navigating the many complex workforce development systems of service providers, trade schools, and other institutions.

02 Difficulty Connecting to Local Students

Enrollment in training programs is growing nationally and locally, yet employers are having difficulty connecting with students. Many large employers in Portland are forced to recruit employees from outside of the city.

03 Access to Skilled Talent

Following a period where youth were often discouraged from going into the trades, there is now a major skill gap between the aging workforce and new employees who are entering the workforce.

04 Training for Employees

Employers need support in creating career pipelines for employees. Small manufacturers often train employees onsite, but many employees must pursue certifications independently. Large manufacturers then have difficulty finding certified workers.

05 Risk of Automation

Many lower barrier metals jobs are at risk from automation, so upskilling is essential for workers seeking a long career in metals.

06 Employee Retention

Businesses have difficulty recruiting and retaining employees because of a shortage of skilled trades workers, and employers are concerned about losing the investment they put into training employees.

Recommendations

01 Connections with Workforce Partners

Create an inventory of workforce programs and map out the ecosystem to identify connections and resources for employers.

02 Workforce Mapping

Build relationships with nonprofits, trade associations, and apprenticeship programs that provide worker training and connect them to businesses.

03 Promote Manufacturing Careers

Connect with Career Technical Education (CTE) programs, nonprofits and institutional partners to promote Portland businesses to potential employees. This includes partnerships to increase visibility for Portland's manufacturers overall, including open houses for students at local manufacturing facilities and active outreach to students and parents to promote skilled trades as a viable and rewarding career.

04 Support for Students

Join regional economic development partners and community colleges to assess the barriers students have in entering the trades. Work with partners to create responsive, industry-specific training programs that connect more businesses and students.

05 Incumbent Worker Training

Launch and support programs for incumbent worker training to develop career pathways for employees at small and medium-sized businesses.

Support Industry Networking, Collaboration & Advocacy



Findings

01 Industry Connections

Businesses are interested in connecting to industry peers to have a collective voice and share their experiences. Metals & Machinery businesses build connections and relationships via in-person engagement, rather than online or via email, which requires an individualized outreach strategy.

02 Industrial Associations

Business associations are invaluable for the resiliency of industrial areas and for the participation of business owners in the civic process. However, many business associations in industrial areas are understaffed and lack the resources to grow membership.

03 Supply Chain Gaps

There are gaps in the local supply chain due to suppliers moving out of the area or closing.

04 Value of Manufacturing

Many Metals & Machinery businesses communicated their belief that the value of jobs in manufacturing is not being adequately conveyed to elected officials and to the broader community.

Recommendations

01 BRE Strategy

Continue proactive Business Retention & Expansion (BRE) strategy for one-on-one engagement with local manufacturers.

02 Industry Collaboration

Support and increase visibility of sector-specific industry groups and peer learning networks to foster collaboration, knowledge sharing, supply chain connections, and mutual support among businesses. Support events in industrial districts that bring neighboring businesses together and better acquaint them with their business associations.

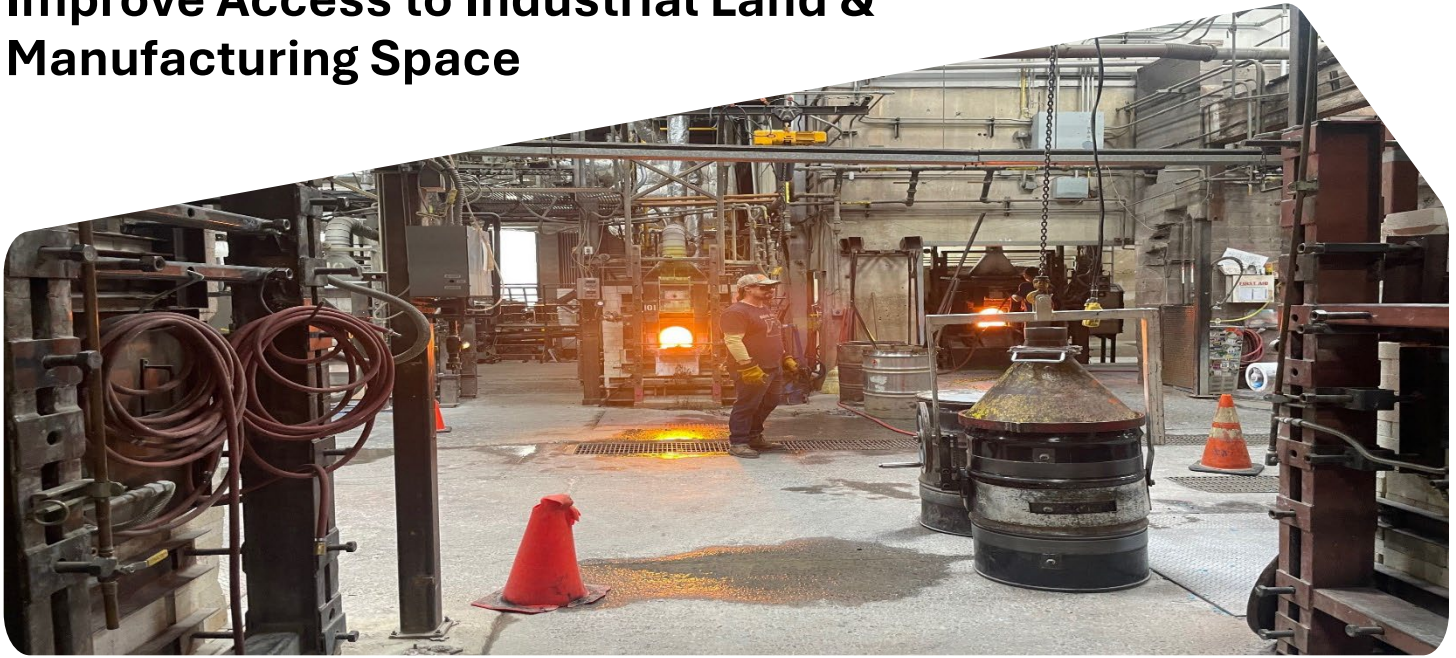
03 Close Supply Chain Gaps

Identify the gaps in local supply chain and actively recruit new businesses to address those gaps.

04 Industry Awareness and Perception

Develop and implement strategies with regional partners to improve the public perception and awareness of the manufacturing sector in Portland, highlighting its contributions, innovation, and the quality of jobs available. Increase communications that familiarize city partners and the general public with the value of local manufacturers.

Improve Access to Industrial Land & Manufacturing Space



Findings

01 Permitting Challenges

Manufacturers perceive the City's permitting process to be unpredictable, complex, and slow, which creates a major barrier to industrial development.

02 Facility Maintenance Costs

Many owner-operator small to medium-sized manufacturers are burdened by costs of facility maintenance.

03 Industrial Land Supply

There is a lack of shovel-ready industrial land in Portland and an underutilization of land due to a lack of infrastructure (e.g., energy and transportation) at many sites.

Recommendations

01 Permitting Improvements

Provide direct assistance to businesses in navigating city permitting processes, acting as a liaison to help troubleshoot delays and bureaucratic hurdles and elevating consistent permitting hurdles that businesses face to city partners. Work with the Office of Small Business and City bureau partners to make City permitting and regulatory requirements easier for manufacturing businesses to navigate.

02 Brownfields Incentives

Work with the Bureau of Planning and Sustainability and State programs to provide incentives brownfield remediation and provide better public infrastructure at underutilized industrial sites.

03 Light Manufacturing Space

Encourage the development of affordable light manufacturing spaces in Portland's central city by applying national best practices in coordination with partners across city bureaus.



Metrics

Metrics

To deliver on the outcomes outlined in this cluster action plan and make evidence-based decisions requires ongoing monitoring. These team-level performance metrics are captured across the Business Advancement Team's activities and are inclusive of all cluster activities teamwide. These will be used to evaluate progress on the goals of this plan and the cluster action plans. This cluster action plan and the metrics included below are aligned to the goals of Advance Portland, the city's 5-year economic development strategy.

Metric	Strategic Target	Notes
Cumulative number of Traded Sector business relocations (within Portland) and expansions	25	Cumulative Strategic Target from FY 2023-24 to FY 2028-2029
Number of Portland Traded Sector companies gaining access to new markets as a tool for growth	10	Annually
Cumulative jobs resulting from traded sector business relocations and expansions within Portland	1250	Cumulative Strategic Target from FY 2023-24 to FY 2028-2029
Number of businesses receiving technical assistance related to growth or inclusion	250	Annually
Number of companies participating in a Public Benefit Agreement or public pledge that aligns with Prosper Portland strategic inclusion goals	150	Strategic Target by FY 2028-2029
Number of employees at companies participating in a Public Benefit Agreement or public pledge	44,000	Strategic Target by FY 2028-2029
Percent of businesses reporting that achieved growth goals as a result of participating in programming	70%	Annually
Number of businesses reporting gaining skills or knowledge that will improve their inclusive practices	150	Strategic Target by FY 2028-2029
Cumulative local investment and spend through Enterprise Zone and business expansion programming FY 2023-24 to FY 2028-29	\$750,000,000	Cumulative Strategic Target from FY 2023-2024 to FY 2028-2029
Cumulative spend at local BIPOC-owned businesses by Portland Means Progress businesses since its launch in 2019	\$700,000,000	Cumulative Strategic Target since 2019 by FY 2028-2029



Industry Outreach

Industry Outreach

Over the course of 2024-2025, Prosper Portland's Metals & Machinery Industry Liaison engaged in individual meetings with 40 businesses across Portland. The composition of these businesses was diverse: 68% were involved in fabricated metal, 12.5% represented primary metal, another 12.5% were machinery companies, and 10% were engaged in the transportation equipment sector.

In terms of company size, 48% were classified as small businesses (with fewer than 50 employees), 35% were classed as medium-size businesses (ranging from 50 and 100 employees), and 17% were classed as large businesses (employing over 100 employees).

Prosper Portland also gathered findings from focus groups with 10 companies, facilitated by the Oregon Manufacturing Extension Partnership. A survey was distributed to the wider manufacturing community.

The Metals and Machinery industry liaison also gathered findings from industry-specific events held by the Columbia Corridor Association, Northwest Industrial Business Association, Cascadia Manufacturing Network and a new informal group, the Makers Hub, who hosted an event focusing on the needs of manufacturers located in Portland.



Photo credit Vigor Marine Group



Conclusion

The Metals and Machinery manufacturing cluster is a cornerstone of Portland's industrial economy, and a key driver of inclusive and sustainable growth. The sector faces a dynamic set of opportunities and challenges—ranging from workforce shortages to capital access barriers to industrial land constraints. However, Portland is uniquely positioned to build on its legacy of industrial innovation through strong technical talent, strategic industry colocation, affordable infrastructure, and a deeply rooted culture of collaboration.

To ensure long-term competitiveness and resilience in the market and for company recruitment and retention, Prosper Portland must continue to work together with regional and state partners to expand access to capital and markets for businesses.

This work also includes strengthening connections to workforce development and funding training pipelines, strengthening partnerships and peer support across the industry, and addressing regulatory barriers to growth.

Advance Portland lays the foundation for a more equitable and prosperous future, and the Metals and Machinery cluster plays a vital part in that vision and in supporting other priority industries, especially Green Cities. By implementing these recommendations, Prosper Portland will advance inclusive economic growth in Portland's Metals & Machinery industry.

Contact the Business Advancement Team

Prosper Portland's Business Advancement Team is a catalyst for equitable economic growth. We help businesses grow by providing support and identifying opportunities that foster the creation of living wage jobs for all Portlanders.

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