GREATER PORTLAND

Industry cluster analysis

Where Greater Portland is gaining ground, and where it must rebuild momentum.



AUGUST 2026

CIVICSOL

ABOUT THIS REPORT

This report shows where Greater Portland is competitive and what is changing within its clusters.

WHAT IT COVERS

A leadership briefing and the evidence beneath it

The analysis moves from the whole traded economy to cluster and subsector performance, then connects the evidence to establishments, workforce, supply chains and company functions.

WHAT IT REVEALS

The findings hidden inside broad cluster totals

Subsectors show where growth, specialization and competitive performance are converging, and where they are not.

HOW TO USE IT

An evidence base for engagement

The analysis identifies the questions to test with employers, suppliers, educators and public partners across Oregon and Southwest Washington.

Source: CivicSol framing based on the supplied Greater Portland cluster workbooks and research decks.

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Nine cluster profiles read the same way, then a deeper dive into the workforce systems beneath them.

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Glossary, how the clusters were chosen, and nine subsector source tables.

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Target clusters were selected through a consistent screen, then refined around Greater Portland's economy.

1

Start with the region's established clusters

The analysis began with the regional CEDS and partner frameworks.

2

Test economic position and role

The screen considered scale, concentration, growth and whether an industry serves outside or regional demand.

3

Refine the definitions at the subsector level

Six-digit NAICS codes were grouped into coherent cluster and subsector lenses. Intentional overlap was preserved.

4

Treat Health Care separately

Health Care is a foundational local-serving anchor system and is not used to describe traded-sector momentum.

Source: Greater Portland cluster selection research and CivicSol methodology synthesis.

Five lines of evidence, run the same way for every cluster.

Each cluster is measured on the same five questions, using the same data, over the same two time windows. The comparisons across clusters in this report hold because nothing changes between them except the industry.

01

Specialization

Location quotients and employment concentration set against the U.S. baseline, so we can see which industries the region does more of than the country does.

02

Scale and growth

Employment and establishment counts for 2015, 2019 and 2025, at cluster and subsector level, in absolute jobs and rates.

03

Competitiveness

Shift-share analysis, which separates growth the region would have had from national industry trends from growth that came from local performance.

04

Value chains

Supplier, producer and buyer positions within each cluster, to show which links the region holds and which it imports.

05

Subsector detail

Every cluster broken to its component subsectors, because cluster totals routinely hide the parts that are gaining or losing ground.

Data: Lightcast 2026.3 employment and establishment data for the Portland–Vancouver–Hillsboro MSA, supplied Greater Portland cluster definitions, and U.S. totals for the same industry codes. Windows: 2015–2025 and 2019–2025.

METHOD · SHIFT-SHARE ANALYSIS

Shift-share answers one question: how much of the change was the region, and how much was the country?

A cluster's job change is split into three parts that add back to the total. Two of them describe forces outside the region. The third is the region's own performance.

National effect

How many jobs the cluster would have added if it had simply grown at the rate of the whole U.S. economy.

EVERYONE GETS THIS. IT IS THE TIDE.

Industry mix effect

The extra jobs, above or below the tide, that come from being in industries the country was growing or shedding.

CREDIT FOR THE HAND YOU WERE DEALT.

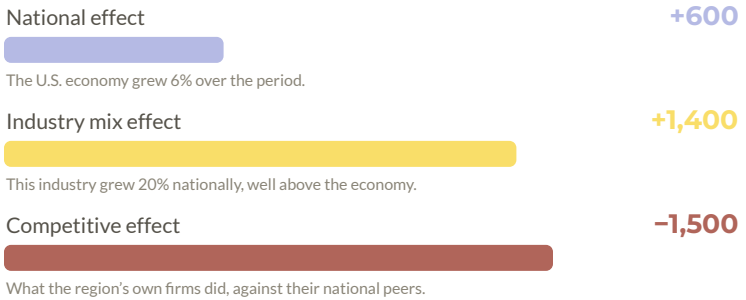
Competitive effect

What is left over. Jobs the region gained or lost because its firms in that industry outperformed or underperformed their national peers.

THIS IS THE PART A REGION CAN ACT ON.

ILLUSTRATION · A MADE-UP CLUSTER

Start with 10,000 jobs. Ten years later the region has 10,500.



ACTUAL CHANGE **+500 jobs**

The cluster added jobs and still lost ground. National conditions were worth 2,000; the region kept a quarter of them.

Throughout this report the national and industry-mix effects are reported together as "growth implied by U.S. industry trends," and the remainder as the competitive effect. Source: CivicSol analysis of Lightcast 2026.3 data.

SECTION 1 OF 3

Leadership briefing

What Greater Portland’s industry data says, and the questions it puts before the region.

01

We use two time frames, and here is why.

WHY THE DECADE LEADS

Ten years spans a full cycle

Neither 2015 nor 2025 is a peak or a trough. The decade contains the expansion, the pandemic and the recovery, so no single event defines it, and it is long enough for specialization, supplier depth and workforce systems to actually change.

WHY NOT START AT 2019

Starting at 2019 measures the pandemic

Greater Portland took that shock harder than most metros. Measuring from the 2019 peak makes every cluster look like it is recovering from a single event and turns a structural question into a rebound question.

WHY WE STILL SPLIT AT 2019

Ten years shows where you are, six shows where you are going

The decade tells you where the region stands. The split tells you which way it is moving, and for six of eight target clusters that direction is down. Read the two together.

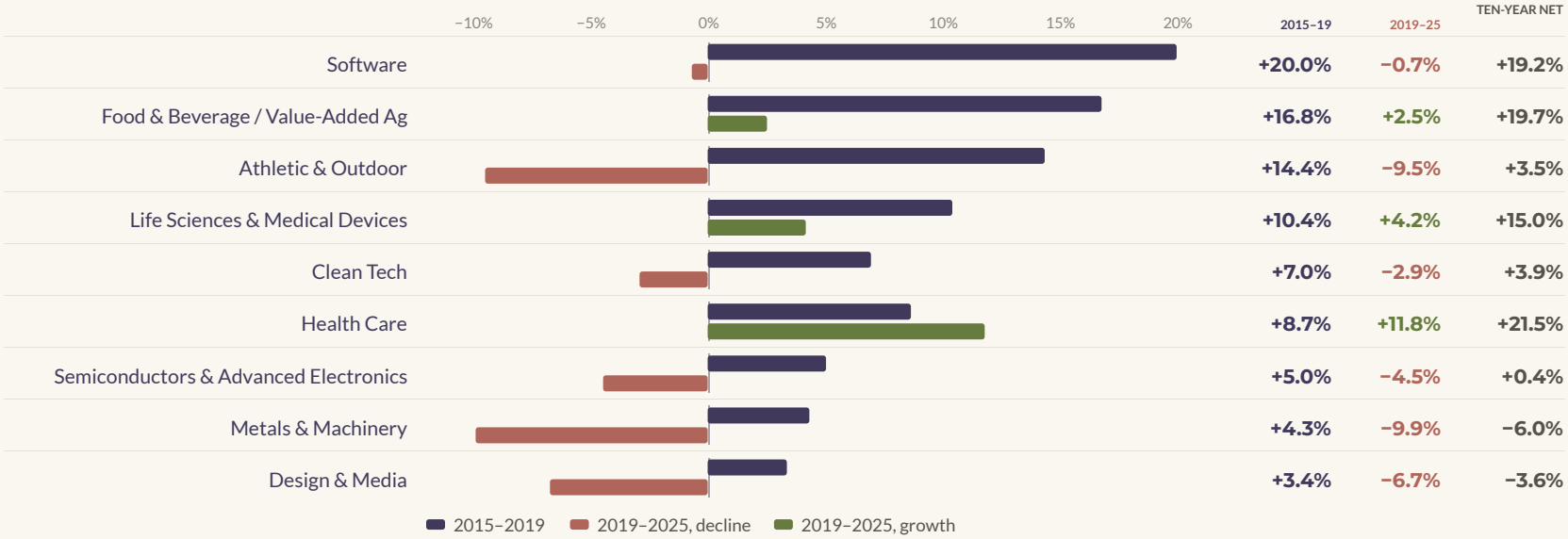
One caution: on the 2019 split the recent record is worse than the ten-year figures suggest, not better. Where the two windows disagree, this deck reports both rather than choosing the more flattering one.

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

01
OF 28

Every target cluster grew through 2019. Six of the eight have shrunk since.

The ten-year net figures average two different periods. Athletic & Outdoor added 6,031 jobs to 2019 and has lost 4,556 since; Semiconductors added 1,968 and has lost 1,827.

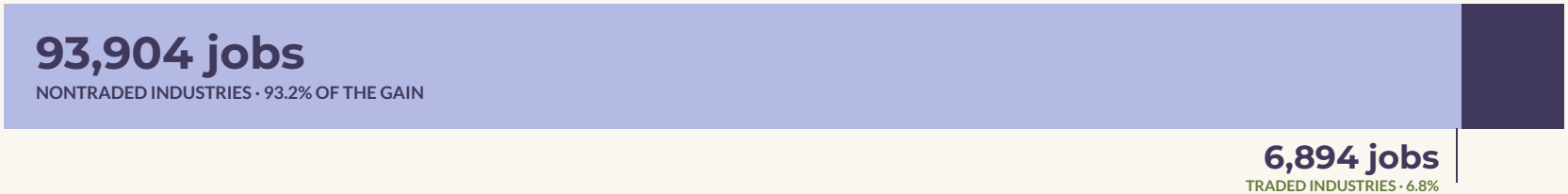


Employment by cluster, 2015, 2019 and 2025. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

From 2015 to 2025, Greater Portland added 100,798 jobs; traded industries added 6,894.

Local-serving and population-driven activity carried most of the region's employment growth during this period.

WHERE THE 100,798 NEW JOBS WENT



REGIONAL EMPLOYMENT
1,359,940
+100,798 jobs | +8.0%

TRADED EMPLOYMENT
439,146
+6,894 jobs | +1.6%

TRADED SHARE
32.3%
down from 34.3% in 2015

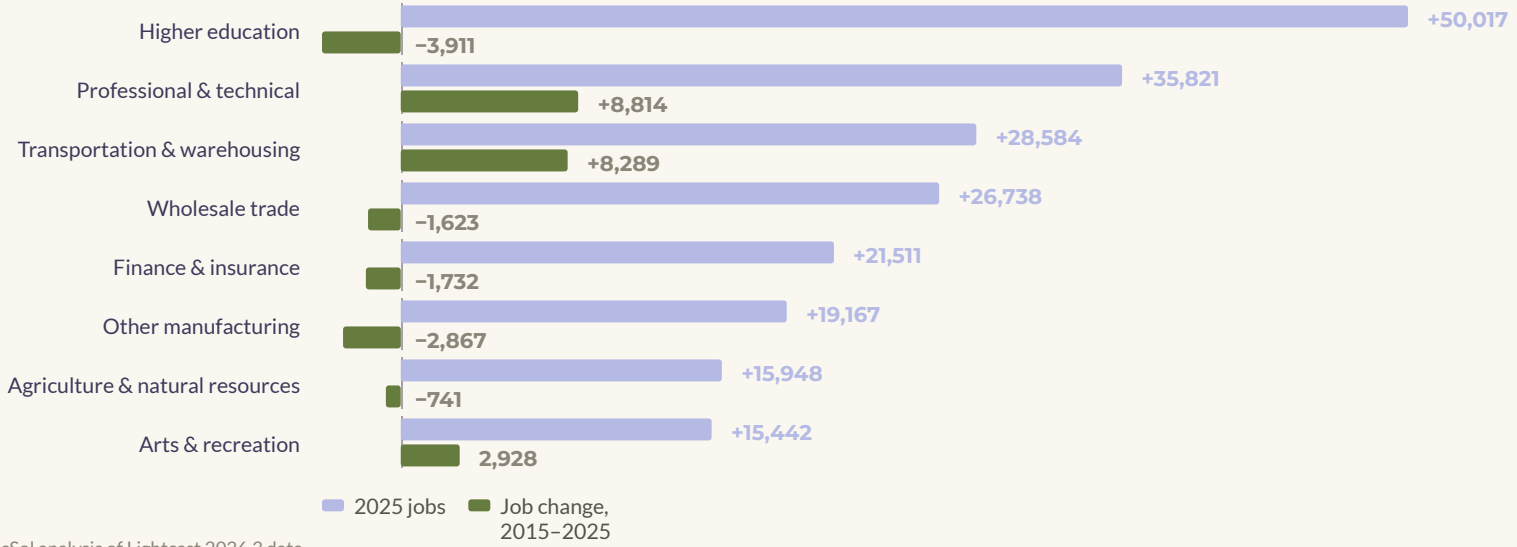
TRADED-SECTOR GRP
$97.1B
46.4% of regional GRP

Nontraded industries accounted for 93,904 of the 100,798 jobs added from 2015 to 2025. Within the target portfolio the direction reversed at 2019: those eight clusters held 231,537 jobs in 2019 and 219,357 in 2025, a 5.3% decline. Counts include subsectors that appear in more than one cluster, and the supplied data does not carry region-wide totals by year, so the traded share cannot be dated.

Source: CivicSol analysis of Lightcast 2026.3 data.

From 2015 to 2025, technical services and logistics added 17,103 jobs, more than twice the traded economy's gain.

Higher education, manufacturing, wholesale trade and finance lost jobs during the same period.



Source: CivicSol analysis of Lightcast 2026.3 data.

Logistics added 8,289 jobs, led by warehousing.

The trend underscores Greater Portland's role as a gateway for producers, suppliers and customers.



Warehousing
+5,595 jobs
67.5% of the logistics job gain, 2015–2025

Rest of transportation
+2,694 jobs
32.5% of the logistics job gain, 2015–2025

PORT OF VANCOUVER
>7M tons
handled annually

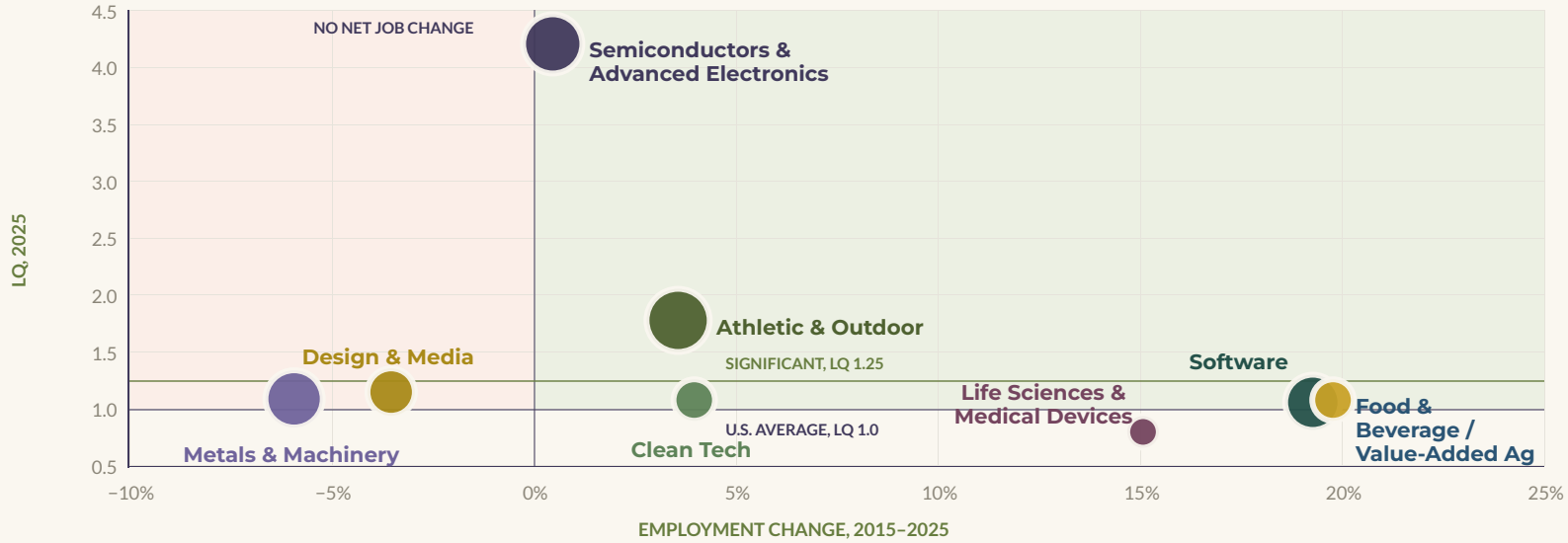
TERMINAL 6
1,500 jobs
supported by operations

The logistics story belongs in the cluster briefing because it connects Greater Portland's traded economy to customers, suppliers and production systems across Oregon and Southwest Washington, and into global markets.

Sources: CivicSol analysis of Lightcast 2026.3 data; Port of Vancouver USA; Port of Portland Terminal 6 reporting.

Greater Portland's largest specializations are not its fastest-growing clusters.

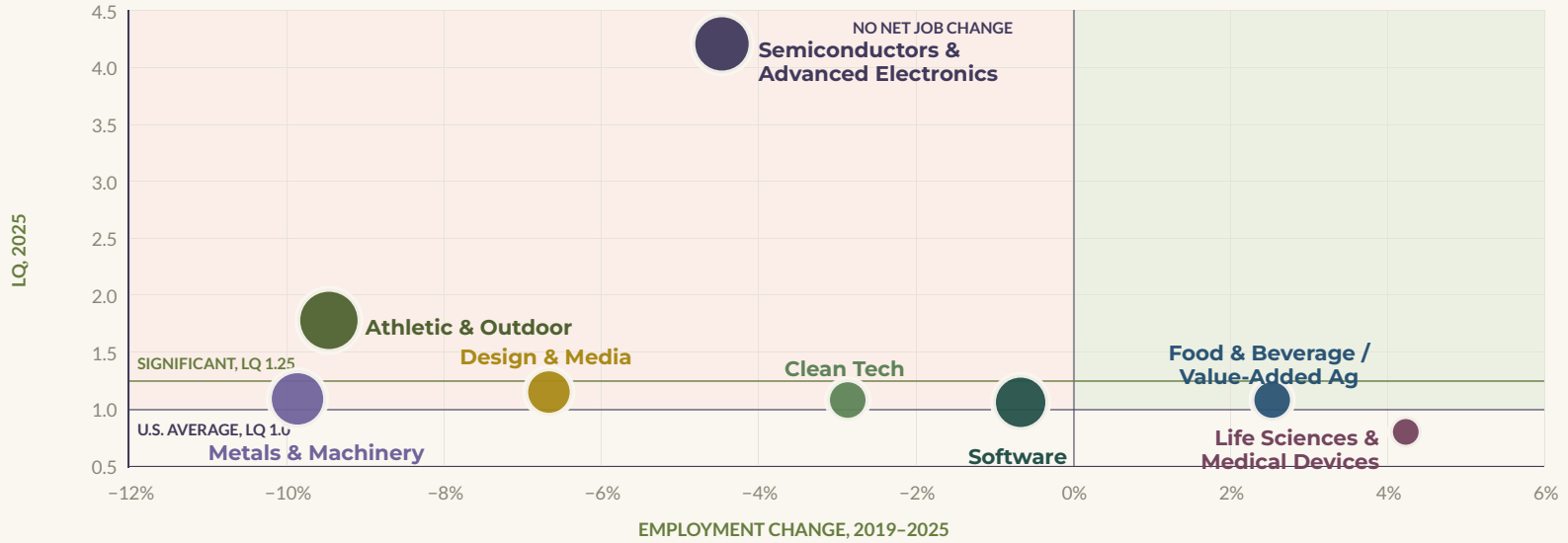
Bubble size shows 2025 employment. LQ 1.0 is the U.S. average; LQ 1.25 marks significant specialization.



Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Measured from 2019, the region's two deep specializations are both losing jobs.

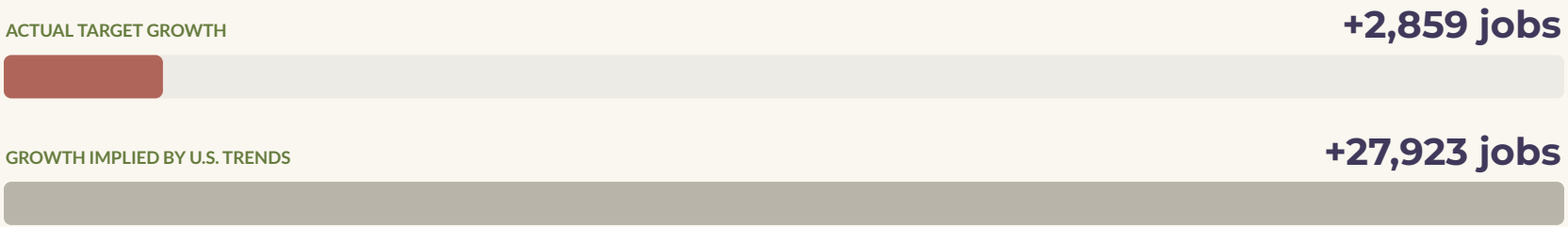
The same view as the previous slide with employment change measured from 2019. Bubble size shows 2025 employment.



Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Greater Portland captured one job for every ten its industry mix could have produced.

From 2015 to 2025, U.S. industry growth implied 27,923 target-cluster jobs; Greater Portland added 2,859.



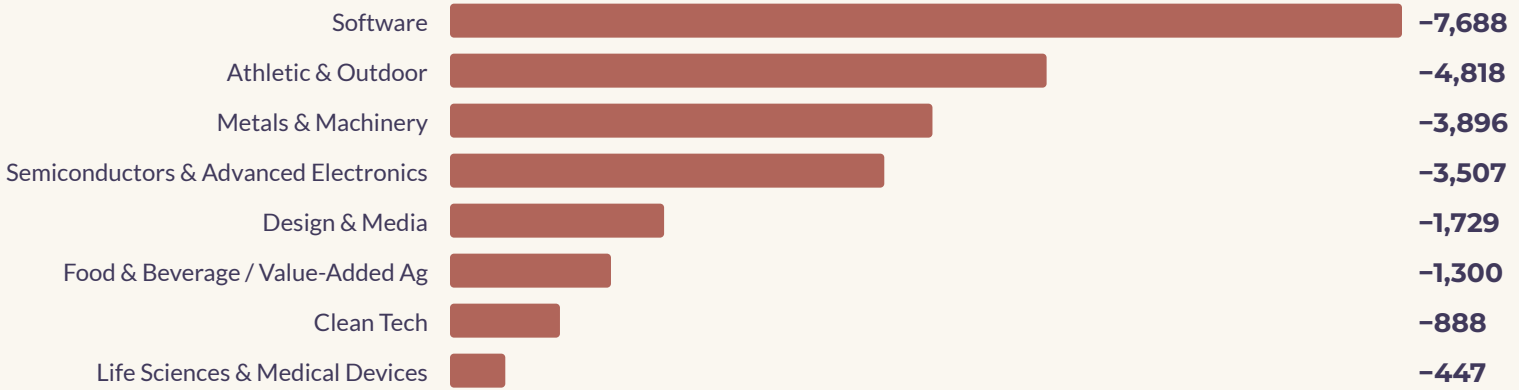
JOBS BELOW U.S. TREND
25,064

Across the unique target portfolio, accumulated over the full decade. Greater Portland was exposed to national industry growth and captured 10% of it. National industry trends are not available by year in the supplied data, so this shortfall cannot be split at 2019.

Source: CivicSol analysis of Lightcast 2026.3 data.

From 2015 to 2025, every target cluster fell short of U.S. industry growth, including those that added jobs.

Positive local growth did not necessarily mean a stronger national position.



Clusters can add jobs and lose competitive ground. Software, Athletic & Outdoor and Food all added jobs, but national industry growth would have produced more.

Bars show jobs above or below the U.S. industry trend, 2015–2025. Source: CivicSol analysis of Lightcast 2026.3 data.

The gap with U.S. industries widened after 2019 and persists in the outlook.

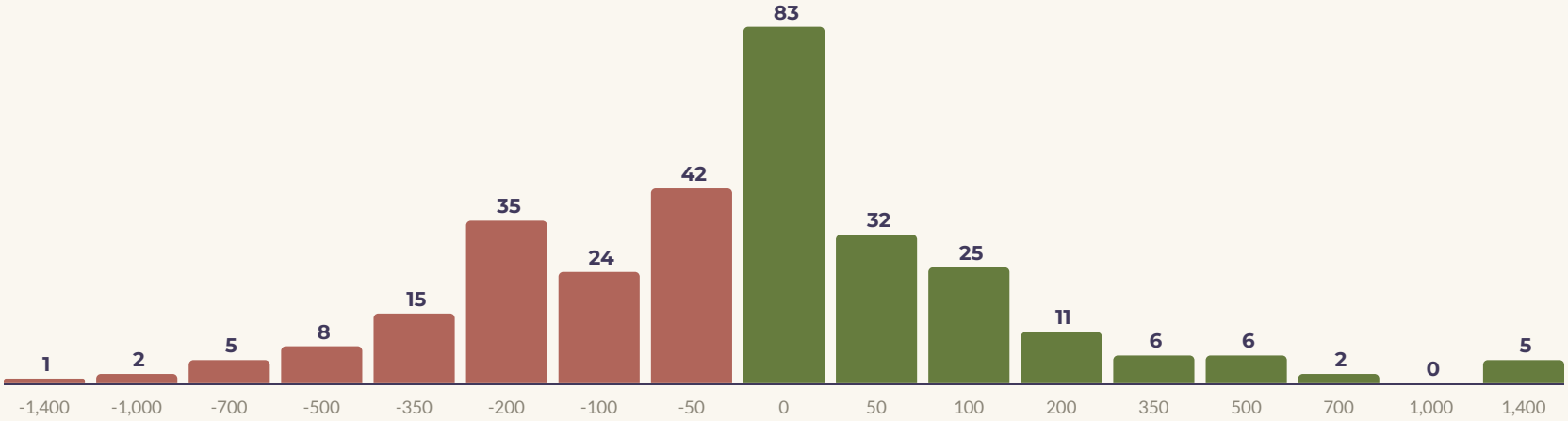
Employment indexed to 2015 = 100, with the 2019 peak marked. Dashed lines show projected paths through 2035. National lines connect 2015 and 2025 only. Projections run from the 2025 base, so a cluster below its 2019 level may be shown recovering toward it.



Source: CivicSol analysis of Lightcast 2026.3 data.

Gains were concentrated in a short list of industries; losses spread across 132 shrinking industries.

The median shrinking industry lost 98 jobs. Half of all losses came from outside the twenty largest declines.



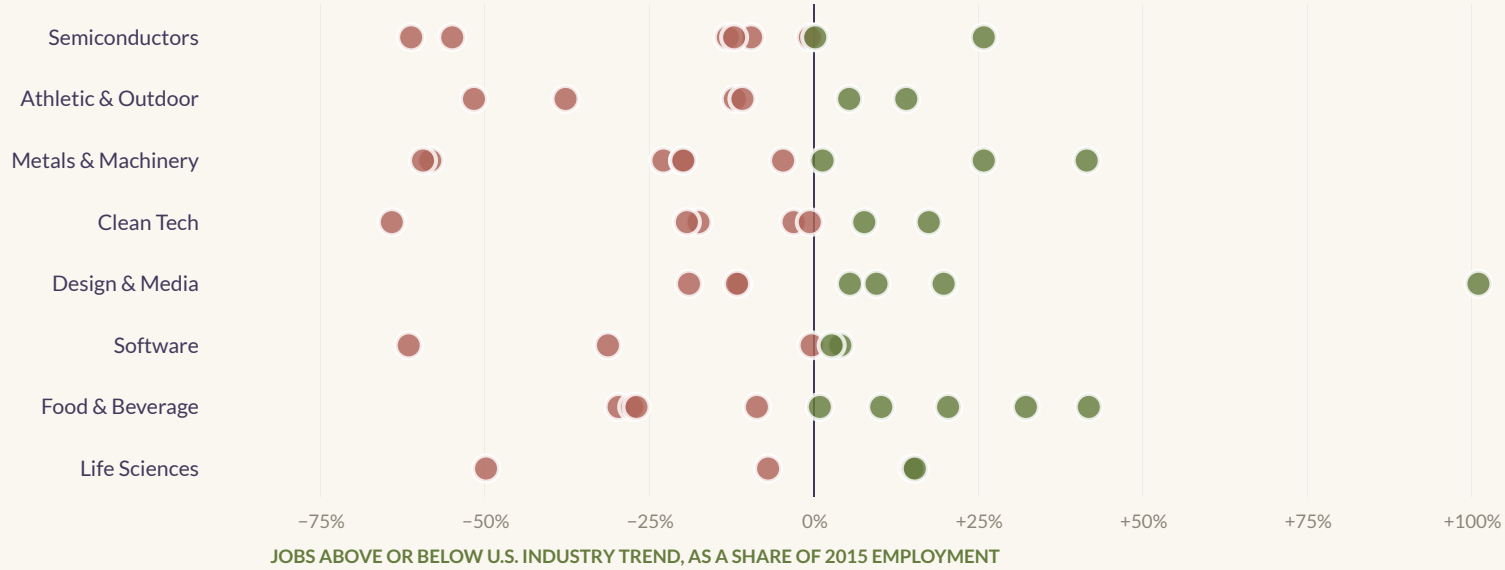
CHANGE IN EMPLOYMENT, 2015–2025 · INDUSTRIES GROUPED BY SIZE OF CHANGE

132 shrank Only eight traded industries lost more than 500 jobs. The decline is broad and shallow, not concentrated in a handful of closures.

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Every target cluster contains subsectors moving in different directions.

Each dot is a subsector, placed by jobs above or below the U.S. industry trend as a share of its own 2015 employment.



Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Not every subsector that beats the national trend is a regional strength.

These selected examples show the difference: some combine outperformance with a concentrated Greater Portland base; others do not.

REGIONAL STRENGTHS THAT OUTPERFORMED
LQ 1.25+ in 2025; jobs above U.S. trend, 2015–2025

Semiconductor equipment	15.79 LQ	+467
Dental and ophthalmic products	6.02 LQ	+241
Milling, grains, oils and sugar	1.81 LQ	+224
Music and sound	1.60 LQ	+200
Marine and recreation equipment	1.36 LQ	+271

What is sustaining the advantage, and where is it vulnerable?

OUTPERFORMANCE WITHOUT THE SAME REGIONAL DEPTH
LQ below 1.25 in 2025; jobs above U.S. trend, 2015–2025

Environmental services	1.10 LQ	+526
Broadcast and digital media	0.69 LQ	+373
Meat and seafood processing	0.53 LQ	+360
Medical equipment distribution	0.64 LQ	+136

Is the gain broad and durable, or concentrated in a few employers and projects?

Selected examples from the 21 subsectors that beat U.S. growth, 2015–2025. LQ values are 2025. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Two of the region's deepest clusters rest on a single industry each, and that is a resilience risk.

A cluster that behaves like one industry moves with one industry. Effective industries is the inverse Herfindahl index: how many industries a cluster acts like, whatever its list length. Athletic & Outdoor lists 22 and behaves like 1.3.

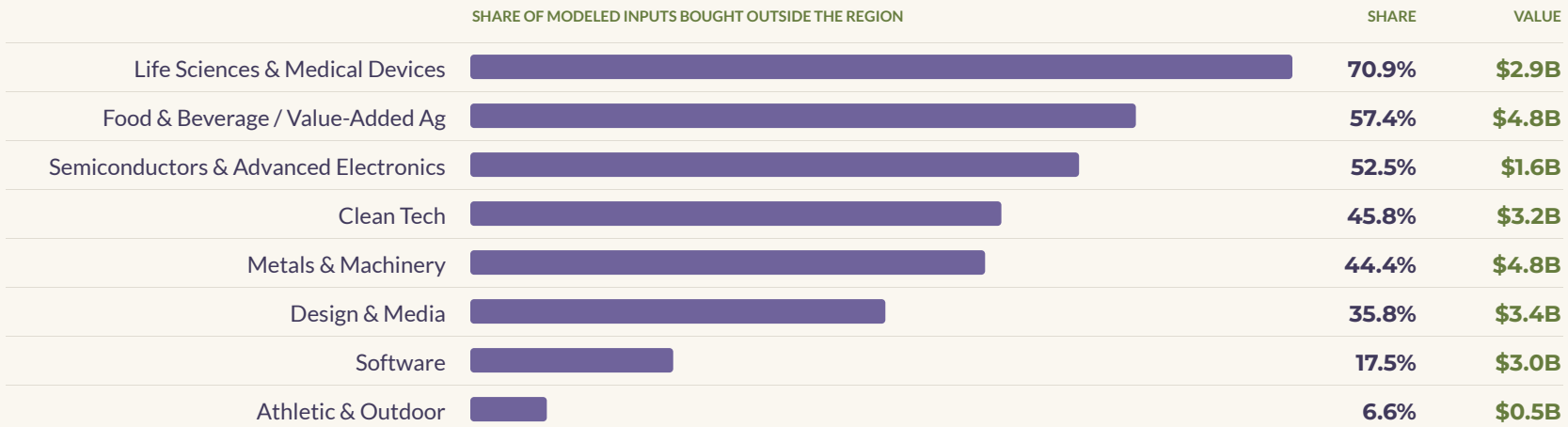


Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

In 2025, target clusters purchased an estimated $24.1 billion in inputs from outside Greater Portland.

Outside purchasing ranged from 6.6% of modeled inputs in Athletic & Outdoor to 70.9% in Life Sciences & Medical Devices.

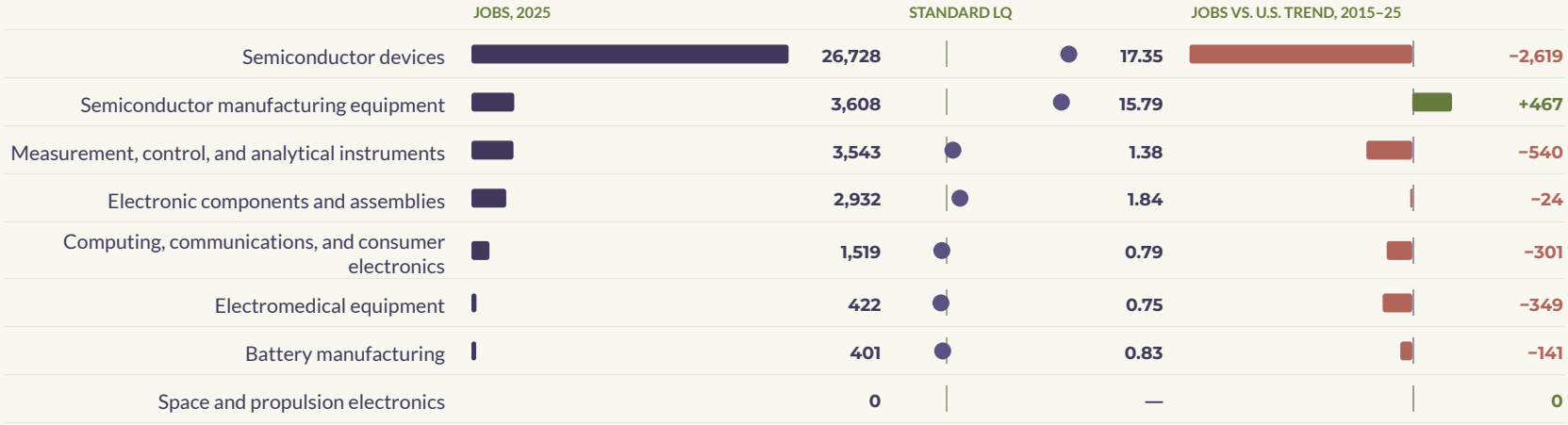
$24.1B TOTAL PURCHASED OUTSIDE GREATER PORTLAND, 2025



Share of modeled inputs purchased outside Greater Portland. Source: CivicSol analysis of Lightcast 2026.3 data.

Over the past decade, manufacturing equipment is the only subsector that outperformed the U.S. trend.

Manufacturing equipment added 1,785 jobs and outperformed U.S. growth; semiconductor device employment fell.

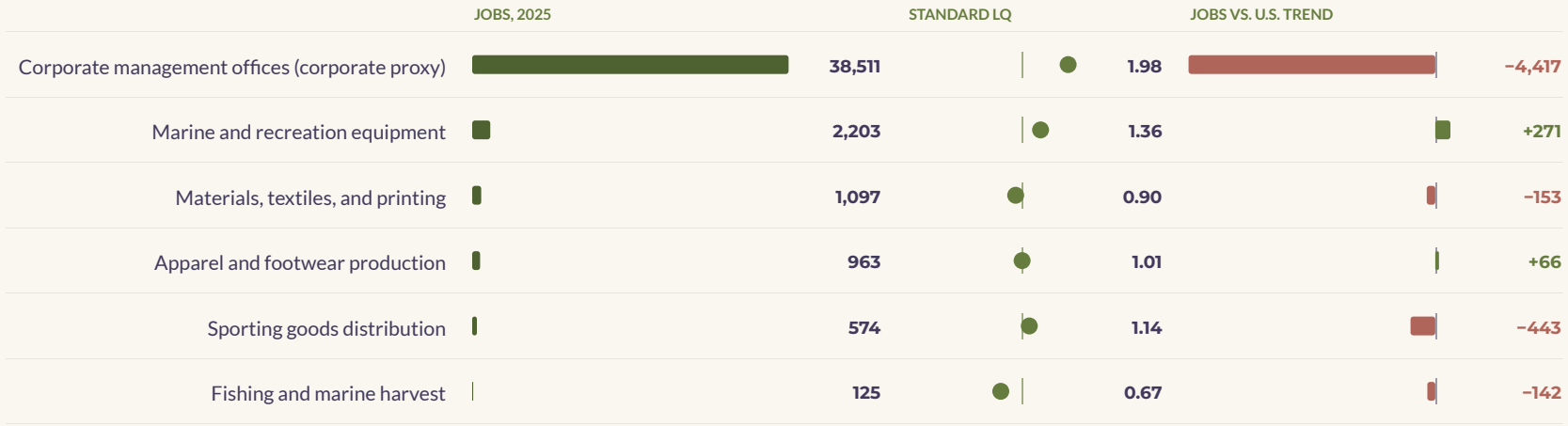


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
39,154	+141 +0.4%	−1,827 −4.5%	4.23	−3,507	392

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Athletic & Outdoor added 1,470 jobs and fell 4,818 below U.S. industry growth.

The cluster's advantage sits in headquarters, product, design, sourcing, technology and brand functions.

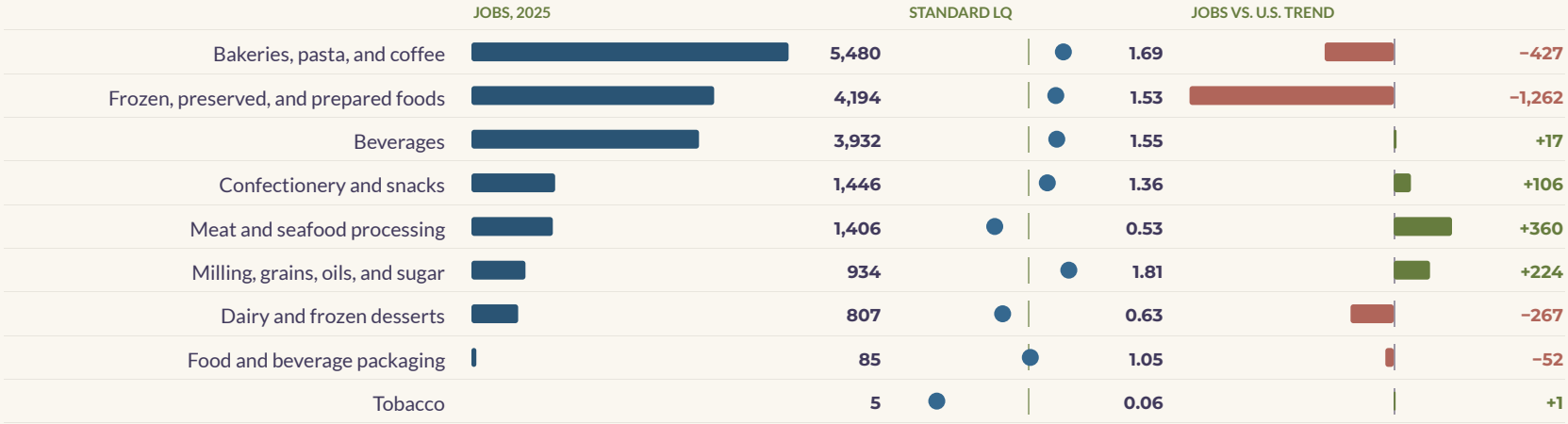


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
43,473	+1,470 +3.5%	−4,556 −9.5%	1.80	−4,818	1,096

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Food & Beverage added 3,015 jobs; three processing niches beat U.S. growth.

Meat and seafood, grains and specialty ingredients, and snacks all gained national ground.

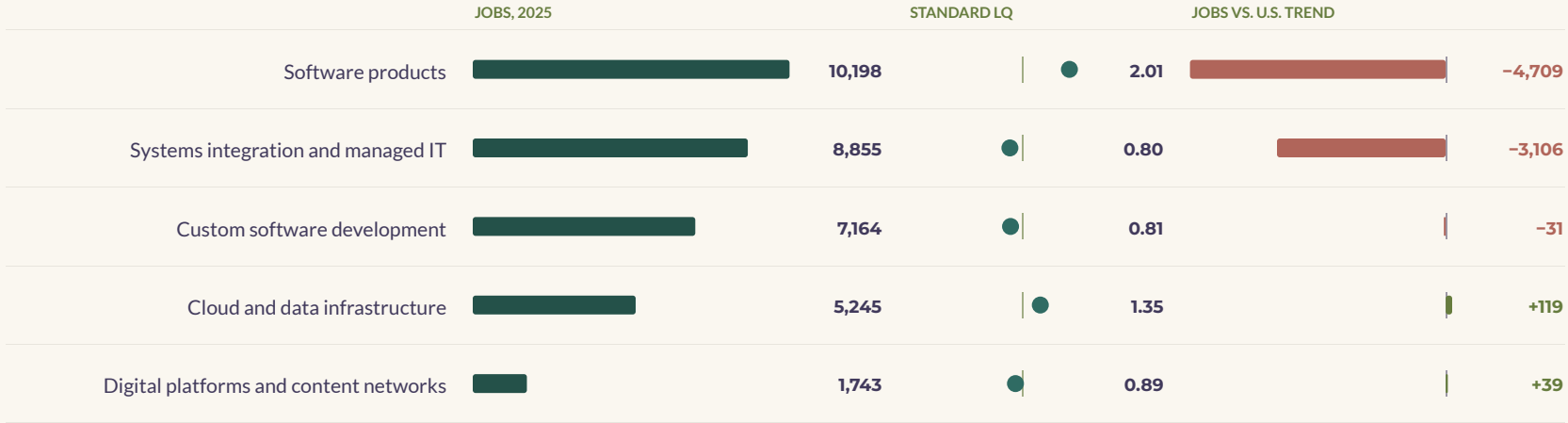


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
18,288	+3,015 +19.7%	+452 +2.5%	1.10	−1,300	907

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Software grew fast in Greater Portland and faster still nationally.

The cluster added 5,341 jobs, the largest gain of any target cluster, and still finished 7,688 below the U.S. industry trend.

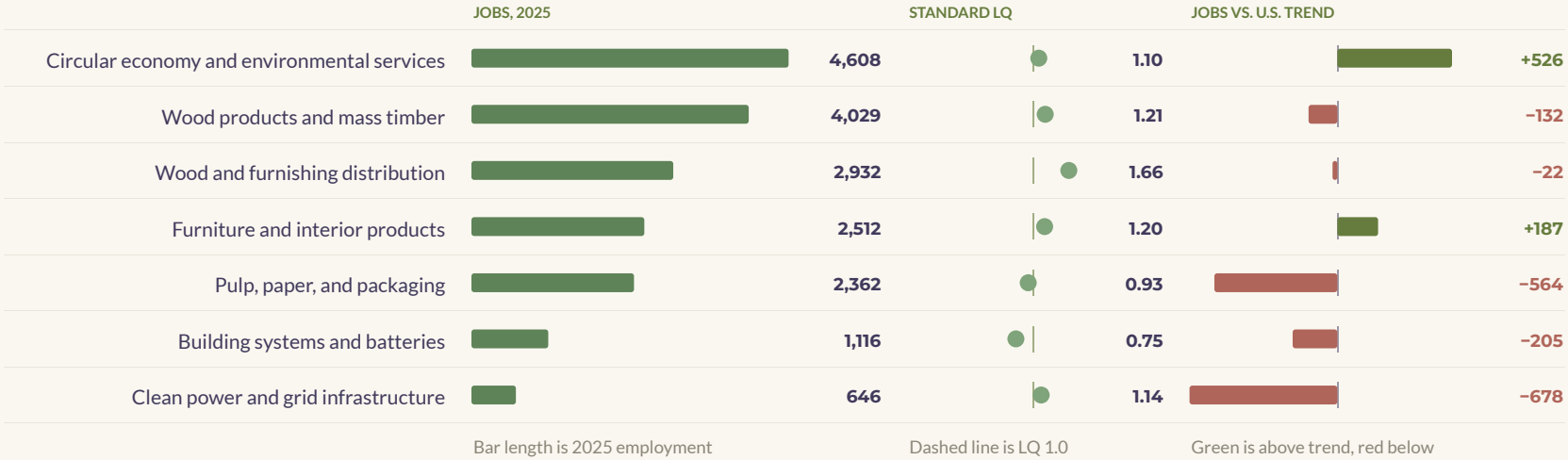


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
33,206	+5,341 +19.2%	−227 −0.7%	1.08	−7,688	6,685

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Environmental services carried Clean Tech growth as legacy industries contracted.

Circular economy activity grew while pulp, paper, packaging and power infrastructure lost ground.

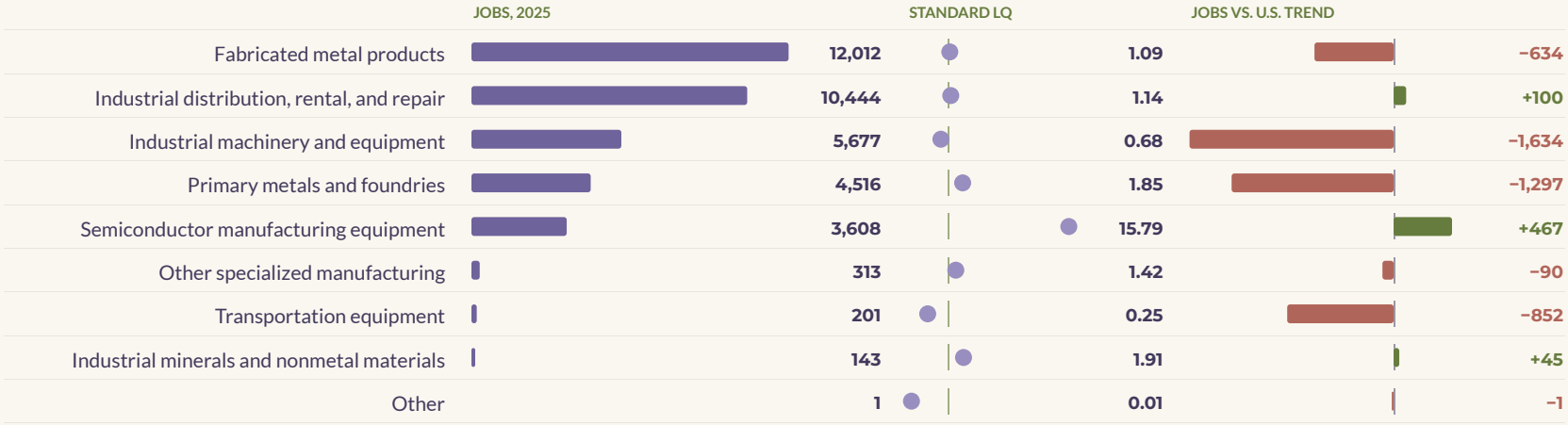


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
18,206	+675 +3.9%	−545 −2.9%	1.10	−888	913

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Traditional metals contracted while semiconductor equipment grew.

Industrial distribution and semiconductor equipment gained; primary metals and machinery contracted.

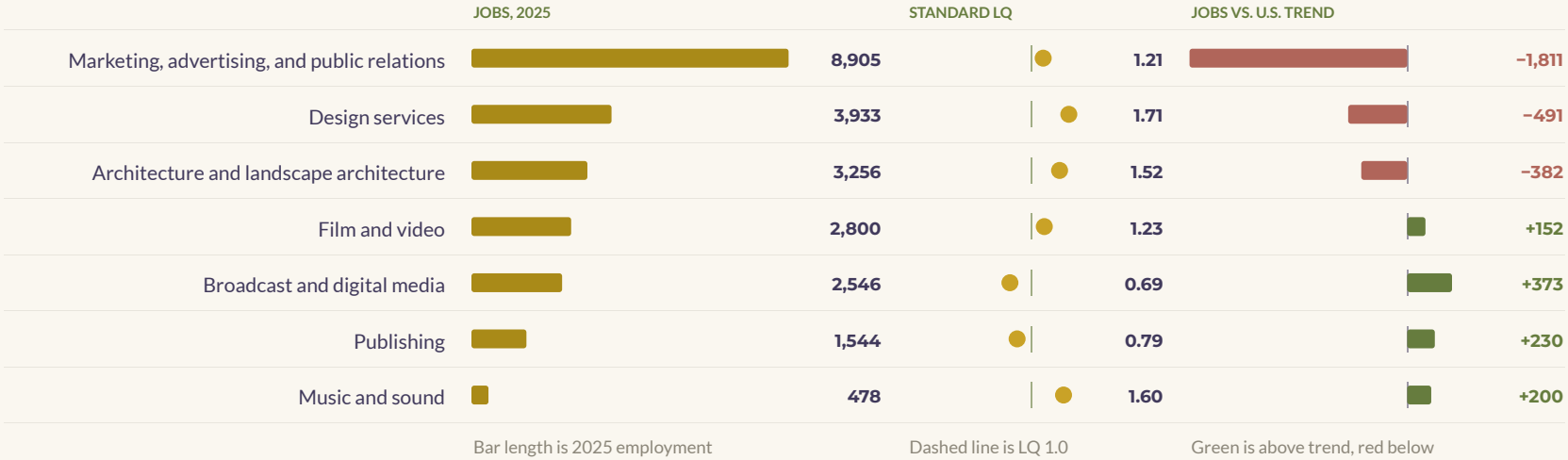


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
36,915	−2,352 -6.0%	−4,052 −9.9%	1.11	−3,896	1,804

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Digital media and music grew. Losses in marketing, design and publishing were larger.

Broadcast and digital media and music gained national ground; commercial creative services fell.

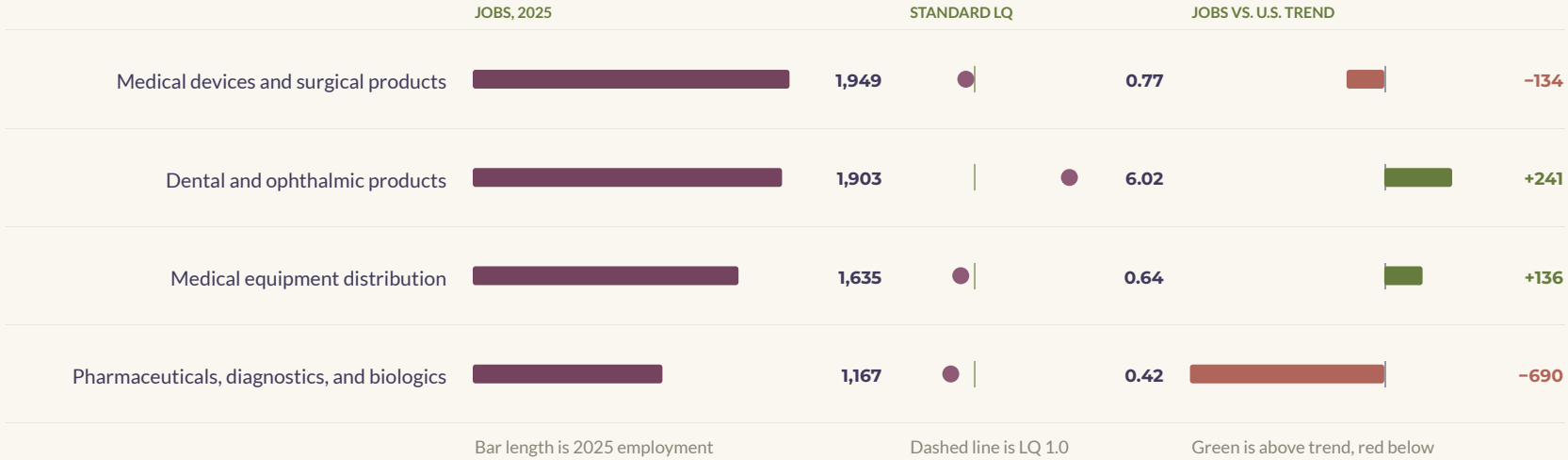


JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
23,462	−870 -3.6%	−1,691 −6.7%	1.17	−1,729	4,034

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Dental products and distribution drove Life Sciences growth; pharmaceuticals contracted.

The cluster added 870 jobs on a small base and remains less concentrated than the nation.



JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
6,653	+870 +15.0%	+267 +4.2%	0.82	−447	443

The cluster profile retains ecosystem overlap; regionwide totals count each subsector once. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Health Care added 25,406 jobs, 3.7 times the traded economy's gain.

It is Greater Portland's largest hiring system, but it plays a different economic role from traded industries.

HEALTH CARE JOBS
143,616
2025 employment

DECADE GROWTH
+25,406
+21.5% since 2015

PROJECTED GROWTH
+12.8%
2025–2035

GROWTH SINCE 2019
+15,167
+11.8% since 2019

TRADED CLUSTERS

Bring outside income into the region; business development centers on national position, value chains and competitive growth.

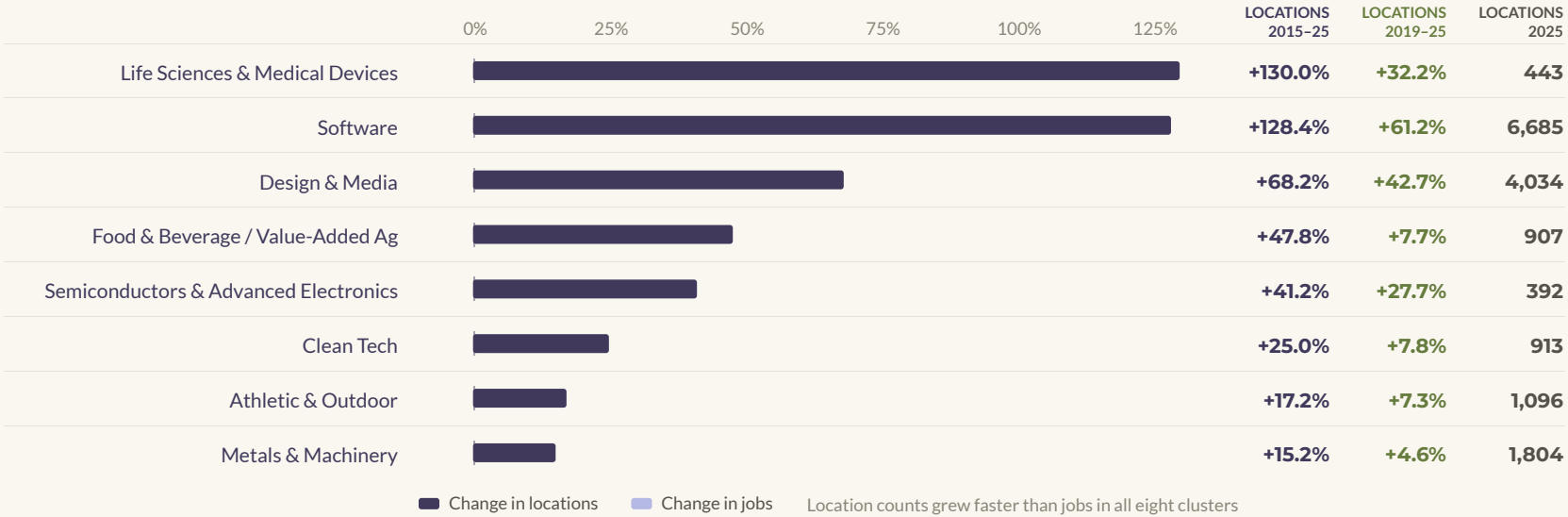
HEALTH CARE

Serves regional demand; workforce development centers on scale, hiring, replacement, access and advancement.

Source: CivicSol analysis of Lightcast 2026.3 data.

Every target cluster kept adding locations, including through the years when it was losing jobs.

Location counts rose in all eight clusters over the decade and in all eight again since 2019, while six of the eight lost jobs over that same period.

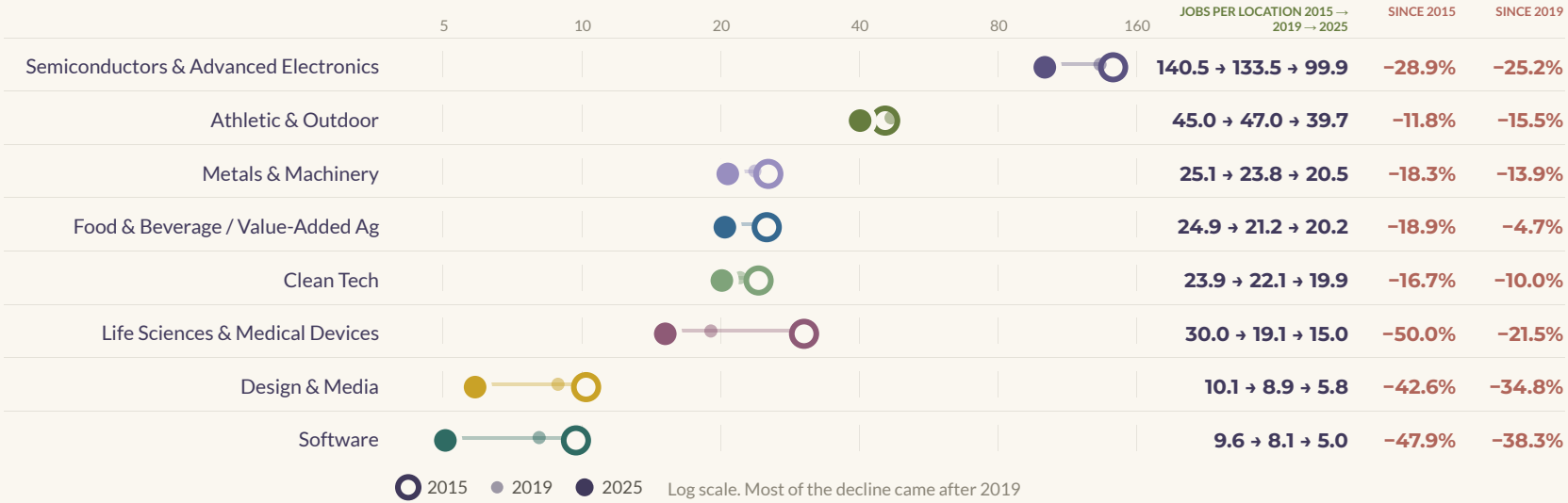


	LOCATIONS 2015–25	LOCATIONS 2019–25	LOCATIONS 2025
Life Sciences & Medical Devices	+130.0%	+32.2%	443
Software	+128.4%	+61.2%	6,685
Design & Media	+68.2%	+42.7%	4,034
Food & Beverage / Value-Added Ag	+47.8%	+7.7%	907
Semiconductors & Advanced Electronics	+41.2%	+27.7%	392
Clean Tech	+25.0%	+7.8%	913
Athletic & Outdoor	+17.2%	+7.3%	1,096
Metals & Machinery	+15.2%	+4.6%	1,804

Establishment counts, 2015, 2019 and 2025. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

However, the average location got smaller in every cluster, and mostly after 2019.

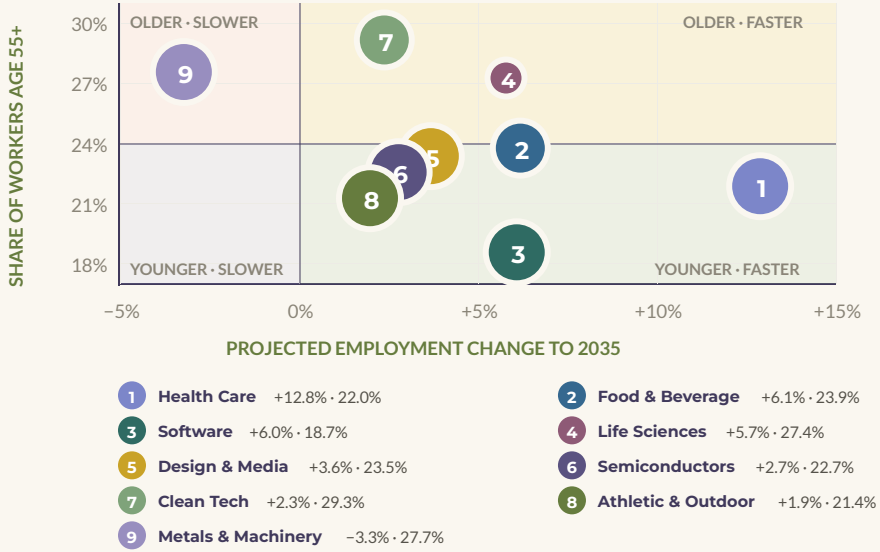
Average employment per location fell across the portfolio. The pattern may reflect smaller operating units, branch locations or a changing firm mix.



Change in average jobs per establishment, 2015–2025. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Greater Portland does not have one workforce problem.

Growth, aging, hiring scale and credential requirements create different challenges by cluster. Bubble size shows 2025 employment.



Source: CivicSol analysis of Lightcast 2026.3 data.

SCALE + HIRING

1 Health Care

Fastest projected growth in the region, +12.8% to 2035

AGE + REPLACEMENT

9 7 4 Metals, Clean Tech, Life Sciences & Medical Devices

The three oldest workforces, 27.4–29.3% age 55+

DEGREE TALENT

3 5 8 Software, Design, Athletic & Outdoor

The youngest workforces, 18.7–23.5% age 55+, in degree-heavy occupations

RETENTION + ADVANCEMENT

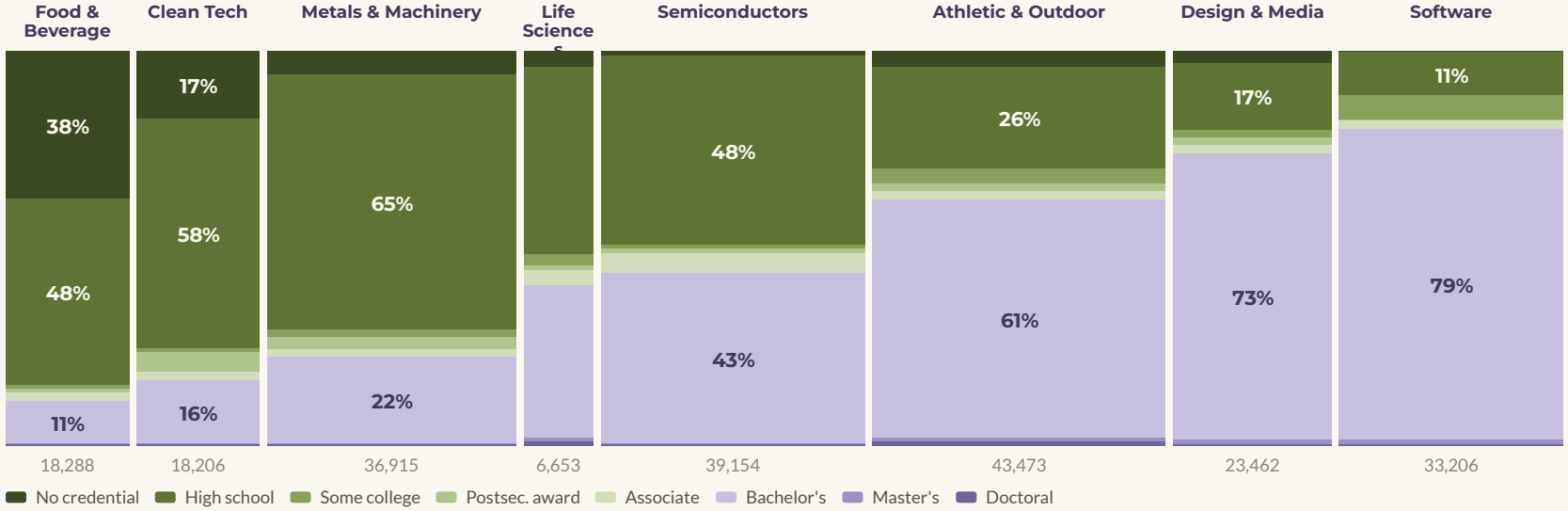
2 1 Food and Health Care

Growing at +6.1% and +12.8% with the highest share of entry-level roles

Numbers match the chart. Credential requirements come from each cluster's occupation mix, not plotted here.

Credential pathways divide the portfolio between production and knowledge-intensive clusters.

Column width is cluster employment. Food & Beverage / Value-Added Ag sits 89% below a bachelor's degree; Software sits 80% above it.



Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Black representation trails in every target cluster; Hispanic representation trails in six of eight.

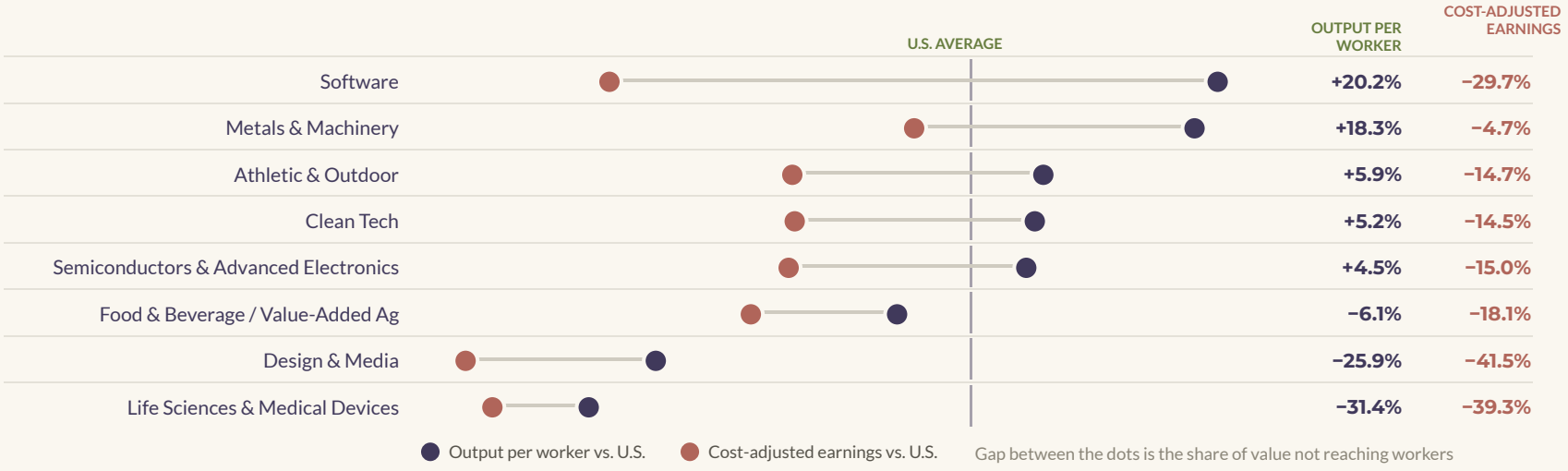
The comparison is to the same industries nationally, not to Greater Portland's overall population.

	HISPANIC	ASIAN	BLACK	TWO OR MORE	ALL WORKERS OF COLOR	WOMEN
Athletic & Outdoor	−3	+1	−7	+1	−6	+1
Semiconductors & Adv. Electronics	−3	+7	−4	+1	+1	−5
Metals & Machinery	−2	+5	−6	+1	−2	−1
Software	−2	−8	−6	+1	−16	−1
Design & Media	−3	−4	−5	+2	−10	−1
Food & Beverage	−7	+3	−10	+1	−13	+3
Clean Tech	+1	+1	−9	+1	−5	0
Life Sciences	+1	0	−7	+1	−5	−2
Health Care	−2	0	−11	+1	−11	−3

Percentage-point difference from the same cluster nationally. Red is under-represented, green over-represented. These comparisons show where representation differs, not why. Employer practices, occupational mix and the region's own demographics all matter.

Source: CivicSol analysis of Lightcast 2026.3 data.

Greater Portland's productivity advantage is not translating into higher cost-adjusted earnings.



Greater Portland creates strong value in several clusters, but that advantage is not reaching workers evenly after cost differences are considered.

Source: CivicSol analysis of Lightcast 2026.3 data.

The clusters carrying the region's national identity are the ones most exposed to AI.

Exposure is scored 0 to 10. It measures how much of the work AI can reach, not how many jobs are at risk.

6.37 Design & Media

6.34 Athletic & Outdoor

6.24 Software

6.11 Semiconductors & Advanced Electronics

THE MIDDLE OF THE PORTFOLIO

Life Sciences & Medical Devices	5.65	Food & Beverage / Value-Added Ag	5.64
Clean Tech	5.55	Metals & Machinery	5.49

4.56 **Health Care, the lowest score in the portfolio**
Its hiring volume is larger than all eight traded clusters combined.

Lightcast AI exposure score by cluster, twelve months of job postings. Exposure is scored 0 to 10 and measures how much of the work AI can reach, not how many jobs are at risk. Cluster scores are averages of the industries beneath them; the supplied data ranges from 4.00 to 7.00. Source: Lightcast AI exposure data supplied to CivicSol.

Greater Portland has a broad portfolio. It built momentum through 2019 and has been giving it back since.

WHAT WORKS

The portfolio serves a wide range of residents and skill sets.

Eight target clusters span manufacturing, software, design, food production and health care, with pathways for blue-collar and white-collar workers alike.

WHAT IS MISSING

Local-serving activity keeps carrying the region's growth, and the traded side has been shrinking since 2019.

Nontraded industries produced 93,904 of the 100,798 jobs added since 2015, and six of the eight target clusters have lost jobs since 2019. That mix narrows career pathways and holds wages down.

WHAT IS POSSIBLE

A stronger traded economy is what turns growth into pathways and pay.

Five clusters already out-produce their U.S. peers per worker. Benchmark data shows earnings here still trail the U.S. after living costs.

93.2%
SHARE OF JOB GROWTH FROM NONTRADED INDUSTRIES

6.8%
SHARE FROM TRADED INDUSTRIES

0 of 8
TARGET CLUSTERS PAYING ABOVE THE U.S. AFTER LIVING COSTS

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Pulling back a decade: six things the 2015–2025 record settles.

01 **The region grew. Its traded industries did not.**

+100,798 jobs regionwide, 2015–2025, of which traded industries produced 6,894.

02 **Every target cluster trailed U.S. industry growth.**

Shortfalls ran from 447 jobs in Life Sciences to 7,688 in Software.

03 **Specialization is real, and narrow.**

Semiconductors sits at LQ 4.23 and Athletic & Outdoor at 1.80. Five more clusters sit just above the U.S. average.

04 **Momentum lives below the cluster totals.**

Twenty-one subsectors beat U.S. industry growth, most of them inside clusters that lost ground.

05 **Productivity is not reaching workers.**

Five clusters out-produce their U.S. peers per worker. None pays more after living costs.

06 **Locations multiplied faster than jobs.**

Average employment per location fell in all eight clusters, by 11.7% to 50.0%.

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Since 2019, cluster growth has been challenging.

01 **Every target cluster grew through 2019. Six of the eight have shrunk since.**
The eight clusters held 231,537 jobs in 2019 and 219,357 in 2025, counting the subsectors that sit in more than one cluster.

02 **Both deep specializations are losing jobs.**
Semiconductors is down 4.5% and Athletic & Outdoor 9.5% since 2019, after gaining 5.0% and 14.4% in the four years before it.

03 **Software stopped growing.**
Up 20.0% from 2015 to 2019, then down 0.7% since. The cluster that carried the portfolio has been flat for six years.

04 **Only two clusters are still adding jobs.**
Food & Beverage is up 2.5% and Life Sciences 4.2% since 2019. Everything else in the portfolio is below its 2019 level.

05 **Locations kept multiplying while jobs fell.**
Software added 61% more locations since 2019 and its average location shrank 38%, from 8.1 jobs to 5.0.

06 **Health care absorbed the difference.**
It added 15,167 jobs since 2019, more than the 12,180 the eight target clusters gave back over the same period.

Employment by cluster, 2019 and 2025. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Six questions to ask our cluster employers.

DEMAND

Which subsectors are gaining durable demand, and which recent gains are cyclical or one-time?

CORPORATE FUNCTIONS

Which design, product, sourcing, technology, marketing and leadership roles belong in the Athletic & Outdoor ecosystem?

SUPPLY CHAIN

Which imported inputs represent recurring, addressable demand with realistic regional suppliers and required certifications?

WORKFORCE

Which occupations face actual hiring constraints, retirement exposure, retention problems or changing skill requirements?

AI AND AUTOMATION

Which tasks are changing, where will technology augment work, and where could it reduce labor demand?

BUSINESS STRUCTURE

Does establishment growth reflect startups, branch locations, restructuring or smaller operating units?


CIVICSOL

SECTION 2 OF 3

The clusters in detail

Nine cluster profiles and a deeper dive into the region’s workforce systems.

02

Nine profiles, and where each one stands.

Each profile runs in the same order: the story, who works here, pathways, workforce renewal, and value and supply chain. Health Care is a local-serving system and is read differently from the traded clusters. The workforce deep dive begins on page 102.

CLUSTER	2025 JOBS	LQ	2015–25	2019–25	PAGES
Semiconductors & Advanced Electronics	39,154	4.23	+0.4%	−4.5%	46–51
Athletic & Outdoor	43,473	1.80	+3.5%	−9.5%	52–57
Food & Beverage / Value-Added Ag	18,288	1.10	+19.7%	+2.5%	58–63
Software	33,206	1.08	+19.2%	−0.7%	64–69
Clean Tech	18,206	1.10	+3.9%	−2.9%	70–75
Metals & Machinery	36,915	1.11	−6.0%	−9.9%	76–81
Design & Media	23,462	1.17	−3.6%	−6.7%	82–87
Life Sciences & Medical Devices	6,653	0.82	+15.0%	+4.2%	88–93
Health Care	143,616	—	+21.5%	+11.8%	94–101

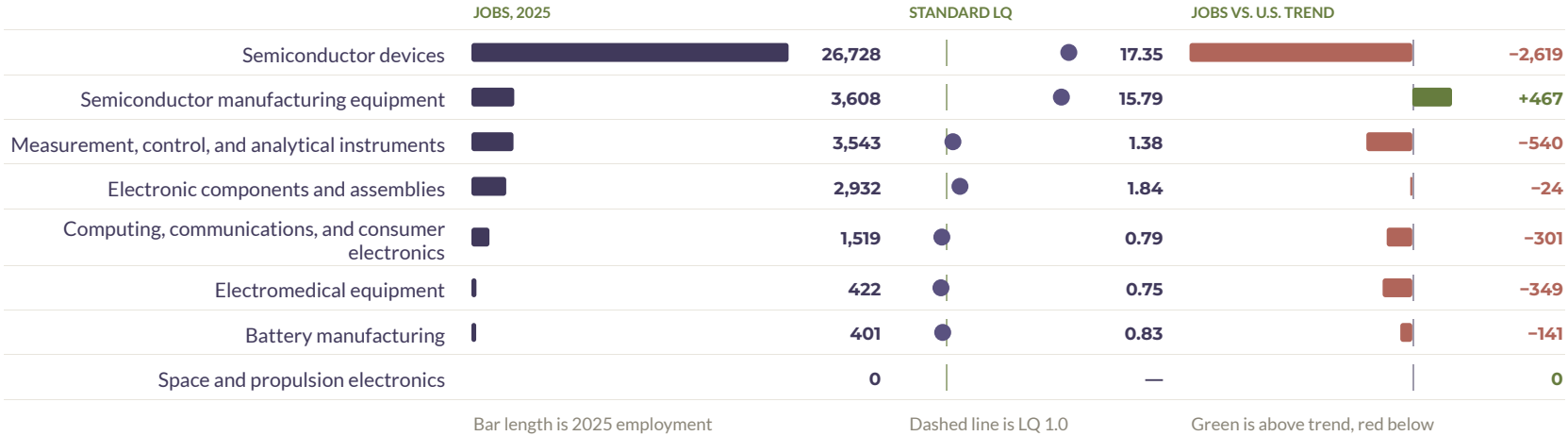
CLUSTER PROFILE

Semiconductors & Advanced Electronics

Manufacturing equipment is the growth engine inside the region’s strongest specialization.

Manufacturing equipment is the only subsector that outperformed the U.S. trend.

Manufacturing equipment added 1,785 jobs and outperformed U.S. growth; semiconductor device employment fell.



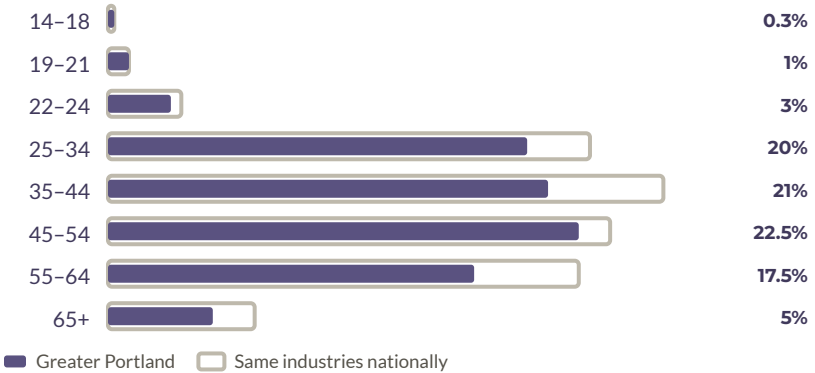
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
39,154	+141 +0.4%	−1,827 −4.5%	4.23	−3,507	392

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

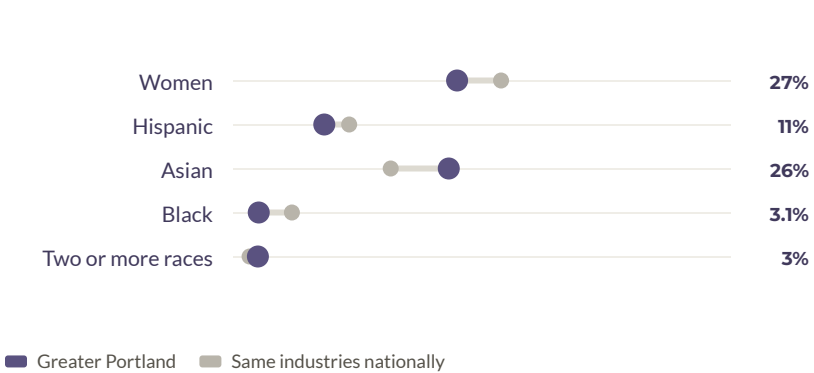
Greater Portland's semiconductor workforce is younger than its U.S. counterpart and has the portfolio's strongest Asian representation.

Asian workers are 26% of the cluster against 19% nationally. Black workers are 3.1% against 7.1%. Women hold 27% of jobs, five points below the national sector.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
22.7%
share of cluster employment

WOMEN
27%
−5.3pp vs. national sector

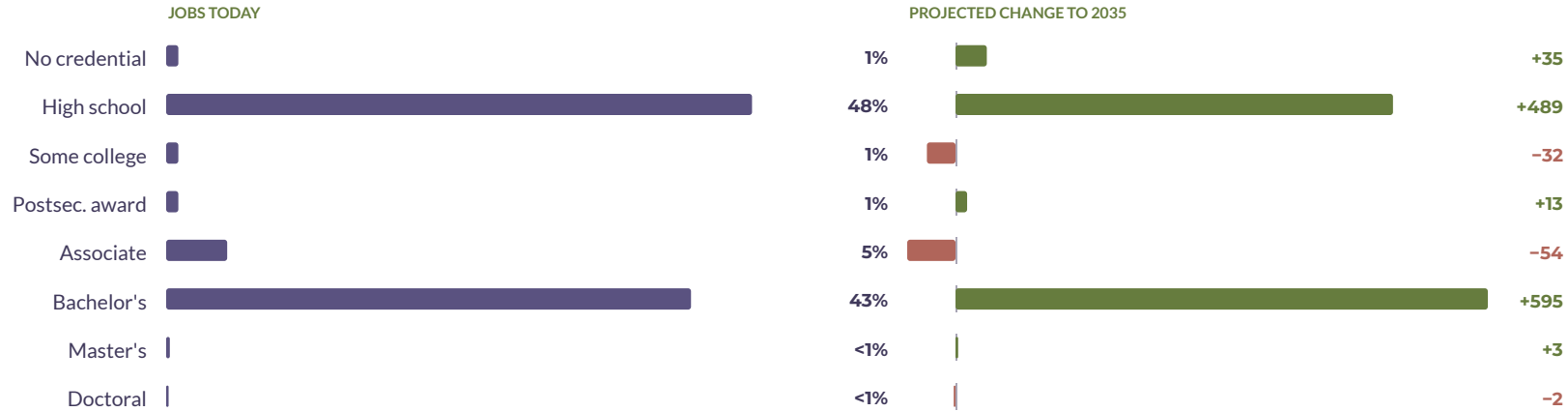
WORKERS OF COLOR
43%
+1.4pp vs. national sector

BELOW A BACHELOR'S
56%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

More than half of semiconductor jobs are in occupations typically entered below a bachelor's degree.

Forty-eight percent sit at high school level and 43% at bachelor's. The cluster is not uniformly high-credential, which matters for how the pipeline is built.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
56%	44%	$188,502	24%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

A younger workforce moderates retirement exposure, but technical replacement needs remain.

AGE-RELATED EXPOSURE

22.7% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

5,612 hires

9,474 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+2.7%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Semiconductors are more than four times as concentrated as the nation and sell about 90% of modeled output outside the region.

VALUE CREATED

OUTPUT PER WORKER
$283,656
+4.5% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$188,502
−15.0% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
4.23 LQ
Significant regional specialization

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
90.1%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
52.5%
$1,606M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

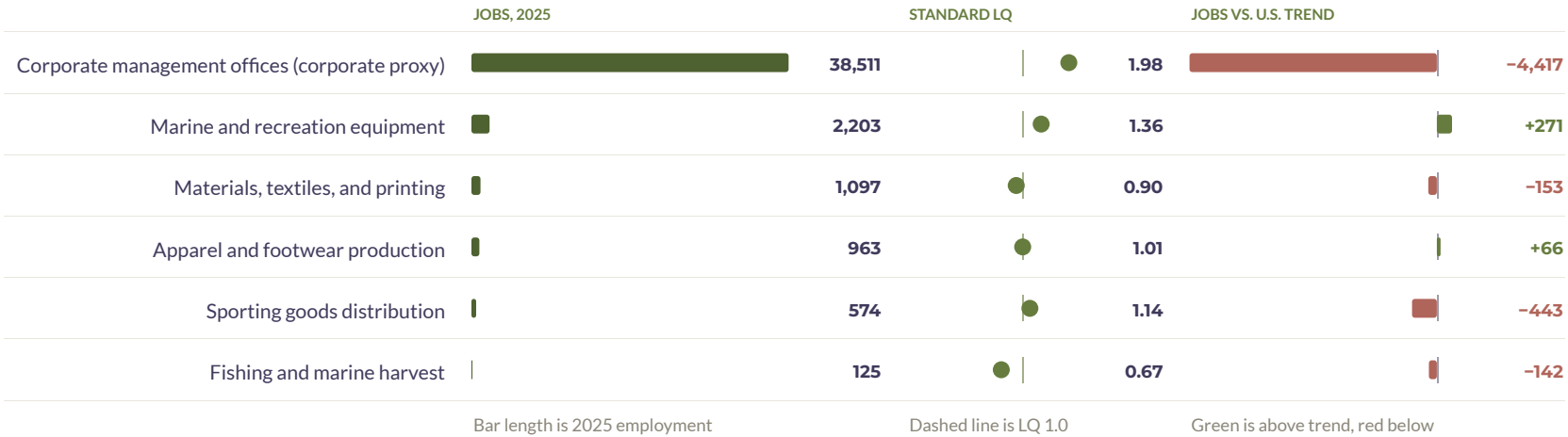
CLUSTER PROFILE

Athletic & Outdoor

The regional advantage sits in headquarters, product, design, sourcing, technology and brand functions.

Athletic & Outdoor added 1,470 jobs and fell 4,818 below U.S. industry growth.

The cluster's advantage sits in headquarters, product, design, sourcing, technology and brand functions.



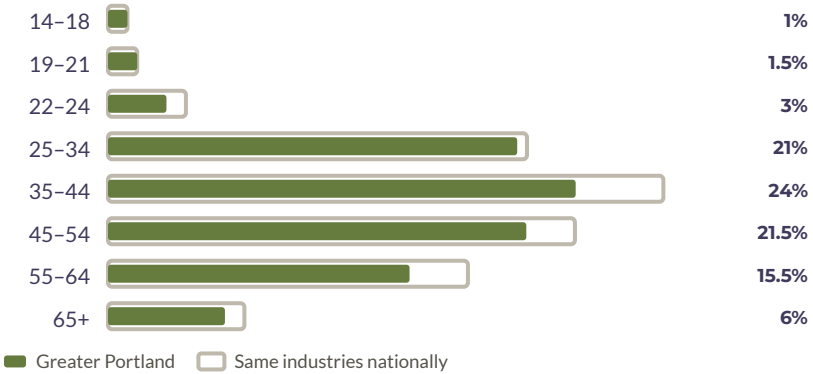
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
43,473	+1,470 +3.5%	−4,556 −9.5%	1.80	−4,818	1,096

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

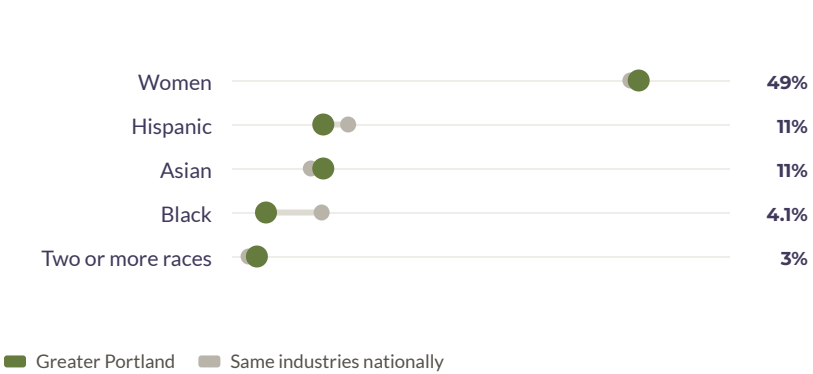
The cluster's corporate structure explains its degree intensity and near gender parity.

Women hold 49% of jobs, making Athletic & Outdoor the portfolio's sole traded cluster at parity. Black workers are 4.1% against 10.8% nationally. Sixty-three percent of jobs are in occupations typically entered with a bachelor's degree.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
21.4%
share of cluster employment

WOMEN
49%
+1.0pp vs. national sector

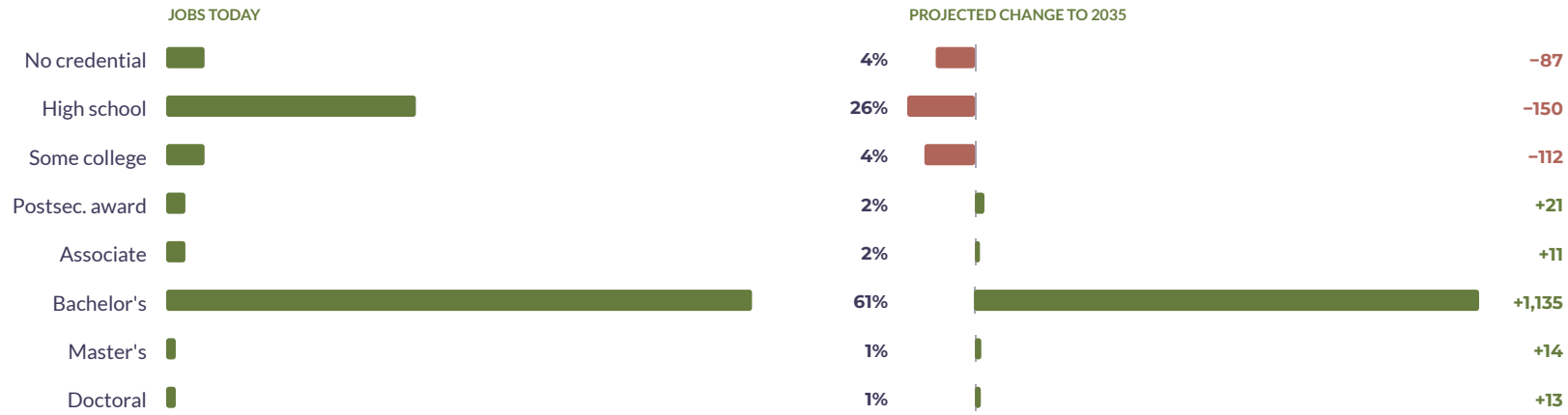
WORKERS OF COLOR
30%
−6.5pp vs. national sector

BELOW A BACHELOR'S
37%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Athletic & Outdoor appears degree-intensive because the current definition is dominated by corporate management.

Sixty-three percent of jobs are in occupations typically entered with a bachelor's degree, a consequence of corporate management being 89% of employment rather than of the product industries.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
37%	63%	$176,121	31%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Most age-related replacement exposure sits in corporate functions under the current definition.

AGE-RELATED EXPOSURE

21.4% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

12,407 hires

13,644 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+1.9%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Athletic & Outdoor combines high earnings with a strong local-purchasing profile, but the result is shaped by the corporate code.

VALUE CREATED

OUTPUT PER WORKER
$205,323
+5.9% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$176,121
−14.7% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.80 LQ
Significant regional specialization

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
49.7%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
6.6%
$500M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

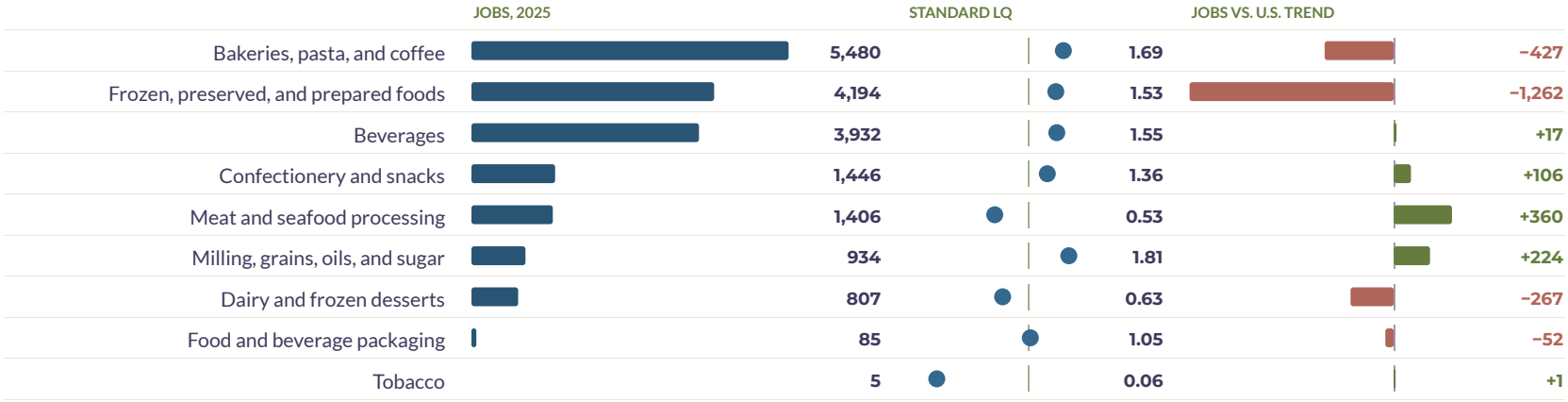
CLUSTER PROFILE

Food & Beverage / Value-Added Ag

Growth is broad, but the strongest gains are concentrated in specific forms of production.

Food & Beverage added 3,015 jobs; three processing niches beat U.S. growth.

Meat and seafood, grains and specialty ingredients, and snacks all gained national ground.



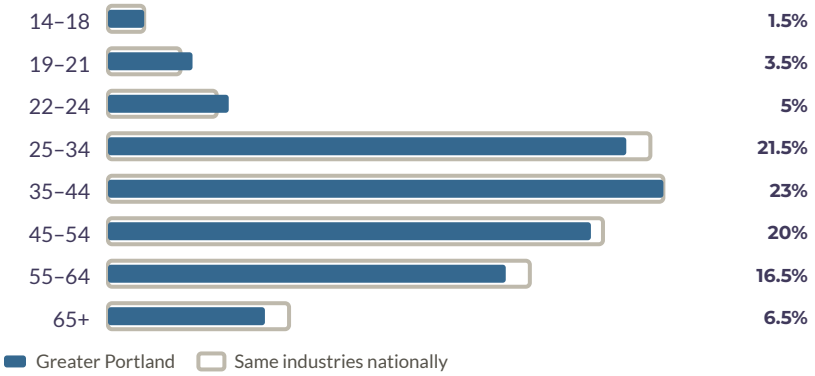
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
18,288	+3,015 +19.7%	+452 +2.5%	1.10	−1,300	907

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

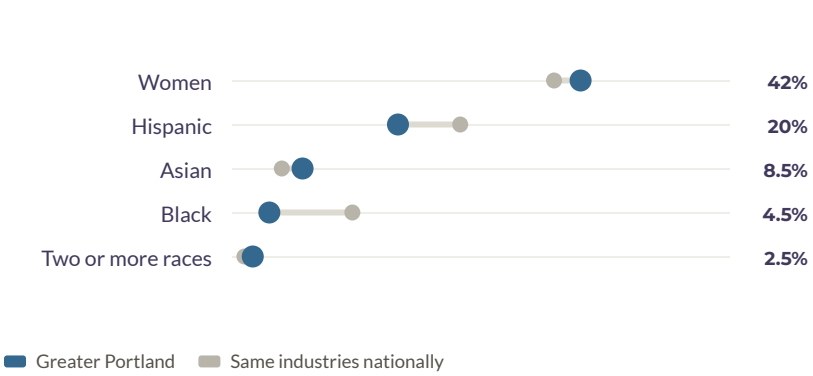
Food & Beverage / Value-Added Ag offers the portfolio's broadest entry pathways and lowest average earnings.

Eighty-nine percent of jobs sit below a bachelor's degree. Workers of color are 37% against 49% nationally, and Hispanic workers 20% against 27%.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
23.9%
share of cluster employment

WOMEN
42%
+3.2pp vs. national sector

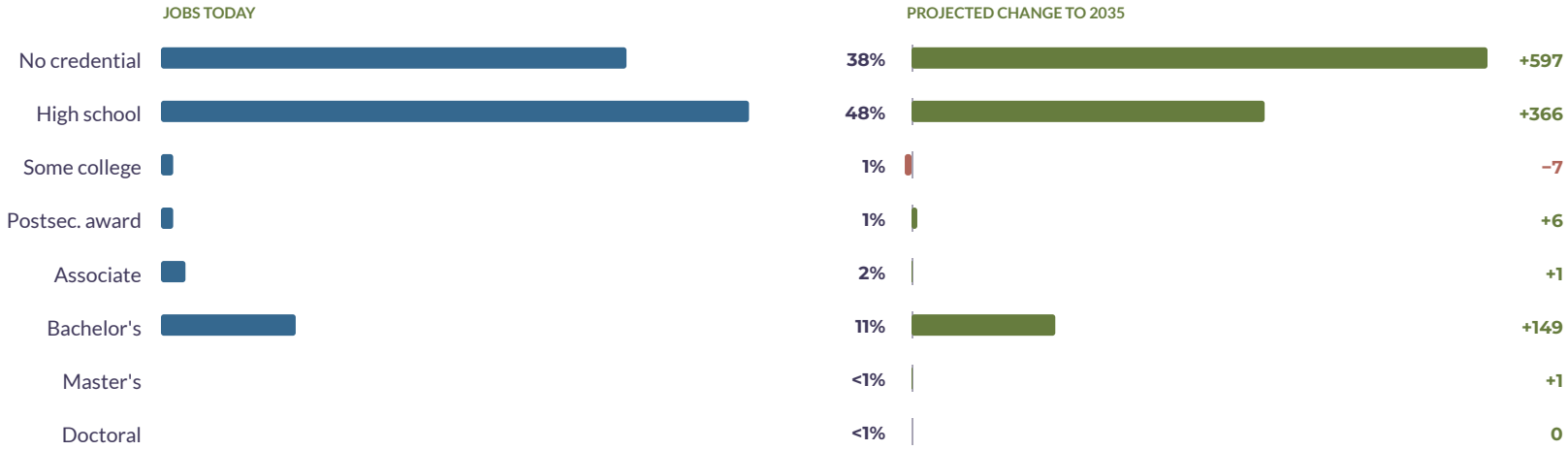
WORKERS OF COLOR
37%
−12.7pp vs. national sector

BELOW A BACHELOR'S
89%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Eighty-nine percent of jobs are in occupations typically entered below a bachelor's degree.

Forty-one percent require no formal credential. It is the widest entry point into the traded base and the lowest-paying.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
89%	11%	$75,163	62%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

High separation rates point to a persistent retention challenge.

AGE-RELATED EXPOSURE

23.9% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

10,752 hires

11,352 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+6.1%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Food & Beverage / Value-Added Ag sources 57% of modeled inputs outside the region and produces 6% less output per worker than U.S. industries.

VALUE CREATED

OUTPUT PER WORKER
$153,114
−6.1% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$75,163
−18.1% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.10 LQ
Near or modestly above the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
57.1%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
57.4%
$4,788M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

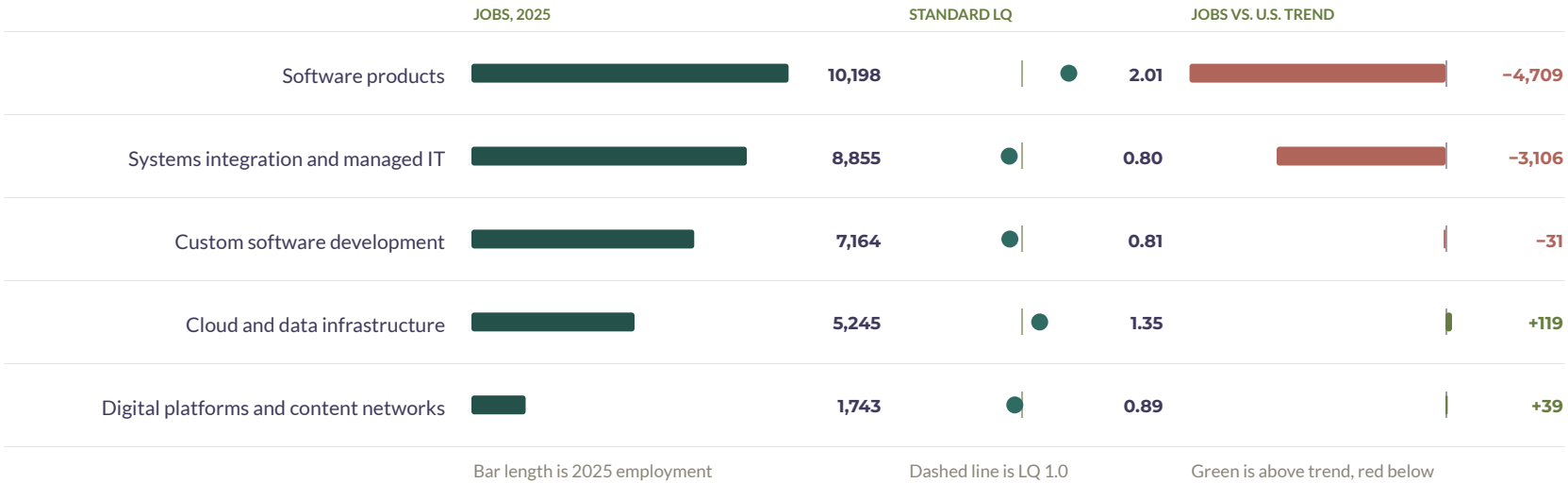
CLUSTER PROFILE

Software

The cluster added jobs while losing ground to faster national growth.

Software grew fast in Greater Portland and faster still nationally.

The cluster added 5,341 jobs, the largest gain of any target cluster, and still finished 7,688 below the U.S. industry trend.



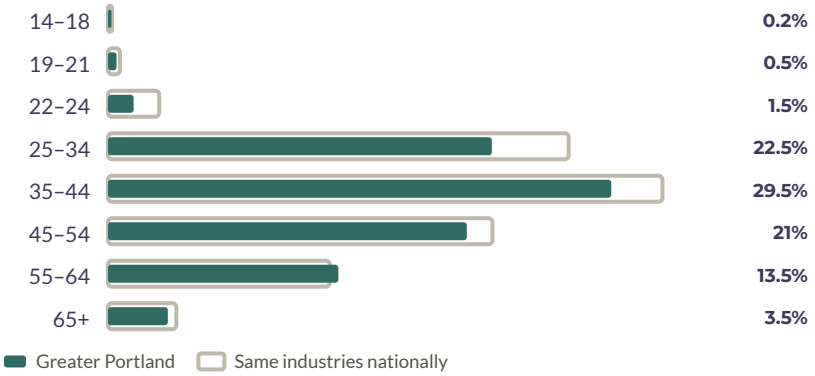
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
33,206	+5,341 +19.2%	−227 −0.7%	1.08	−7,688	6,685

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

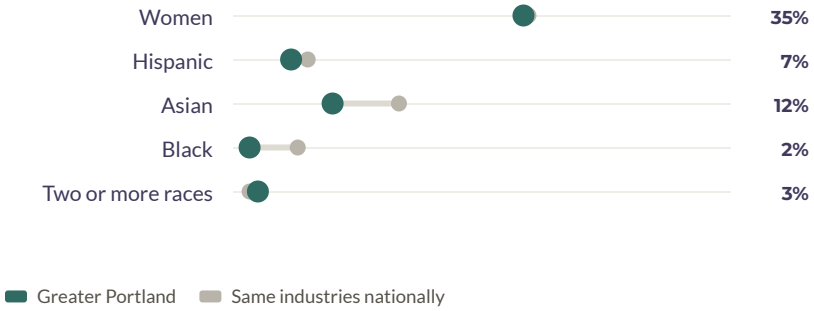
Software has the portfolio's youngest and most degree-intensive workforce.

Asian workers are 12% against 20% nationally and Black workers are 2.0% against 7.8%. Eighty percent of jobs are in occupations typically entered with a bachelor's degree, the highest barrier in the portfolio.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
18.7%
share of cluster employment

WOMEN
35%
−0.6pp vs. national sector

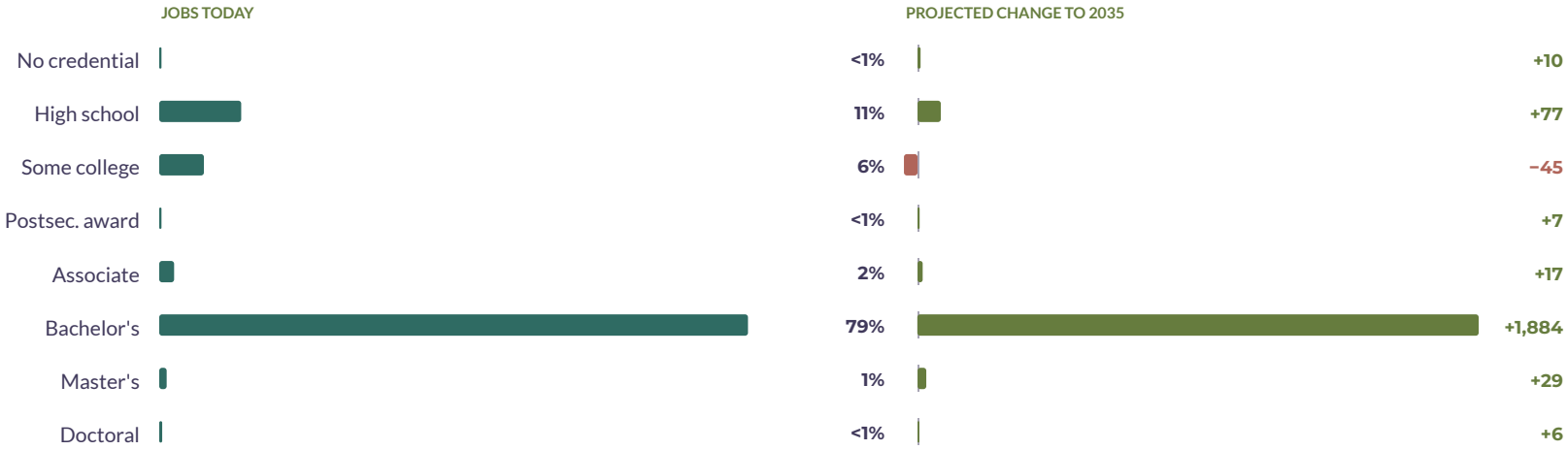
WORKERS OF COLOR
24%
−15.8pp vs. national sector

BELOW A BACHELOR'S
20%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Four in five software jobs are in occupations typically entered with a bachelor's degree.

Twenty percent of jobs sit below a bachelor's degree. Projected growth through 2035 is concentrated at degree level.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
20%	80%	$190,775	33%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Software's young workforce reduces retirement exposure, but growth depends on degree-level talent.

AGE-RELATED EXPOSURE

18.7% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

9,796 hires

10,935 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+6.0%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Software produces 20% more output per worker than U.S. industries, while cost-adjusted earnings trail by 30%.

VALUE CREATED

OUTPUT PER WORKER
$397,134

+20.2% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$190,775

−29.7% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.08 LQ

Near or modestly above the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
33.9%

A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
17.5%

$2,953M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen

The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

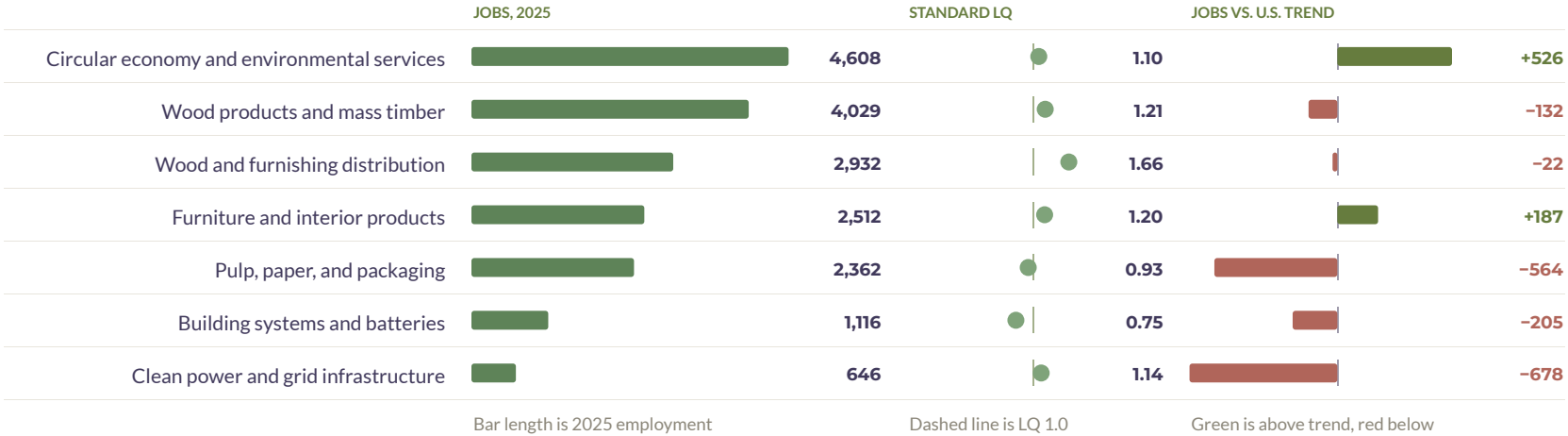
CLUSTER PROFILE

Clean Tech

Environmental services are growing while grid infrastructure and legacy production contract.

Environmental services carried Clean Tech growth as legacy industries contracted.

Circular economy activity grew while pulp, paper, packaging and power infrastructure lost ground.



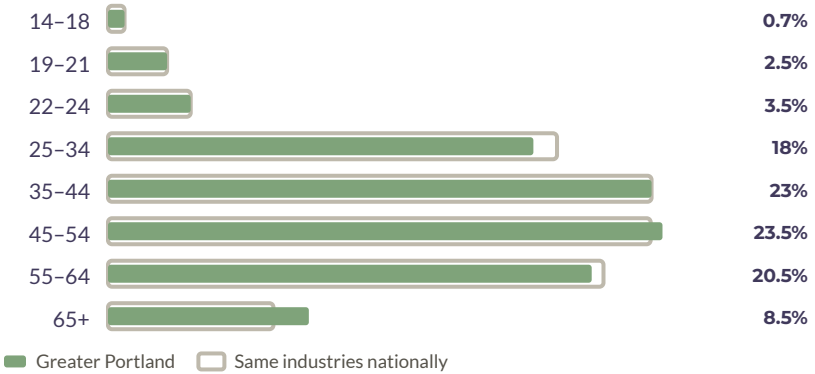
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
18,206	+675 +3.9%	−545 −2.9%	1.10	−888	913

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

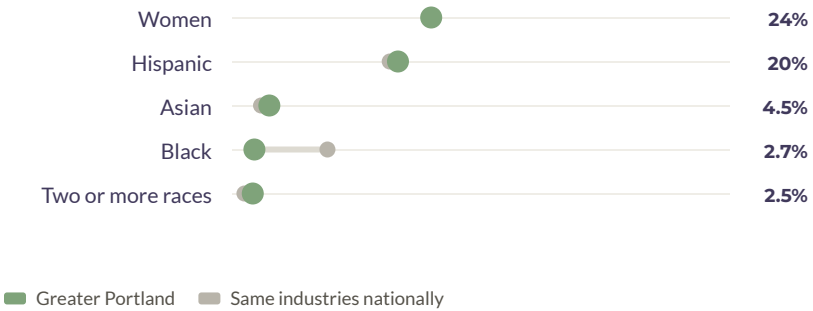
Clean Tech combines the portfolio's oldest workforce with broad sub-bachelor pathways.

Twenty-nine percent of workers are 55 or over. Women hold 24% of jobs. Hispanic workers are well represented at 20%, but Black workers are 2.7% against 11.5% nationally.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
29.3%
share of cluster employment

WOMEN
24%
−0.3pp vs. national sector

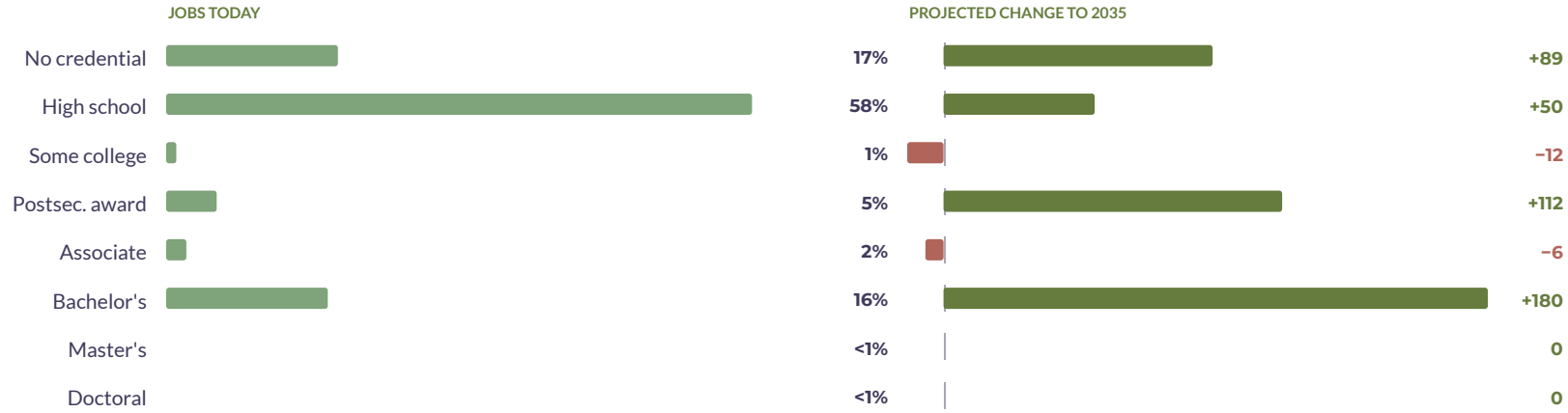
WORKERS OF COLOR
31%
−5.2pp vs. national sector

BELOW A BACHELOR'S
84%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

More than eight in ten Clean Tech jobs are in occupations typically entered below a bachelor's degree.

The cluster combines the oldest workforce in the portfolio with the second-lowest credential barrier, which concentrates both replacement need and access opportunity.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
84%	16%	$99,242	38%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Twenty-nine percent of Clean Tech workers are 55 or older.

AGE-RELATED EXPOSURE

29.3% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

6,744 hires

6,995 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+2.3%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Clean Tech sources 46% of modeled inputs outside the region, but supplier needs differ across its industrial parts.

VALUE CREATED

OUTPUT PER WORKER
$208,438
+5.2% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$99,242
−14.5% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.10 LQ
Near or modestly above the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
50.4%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
45.8%
$3,223M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

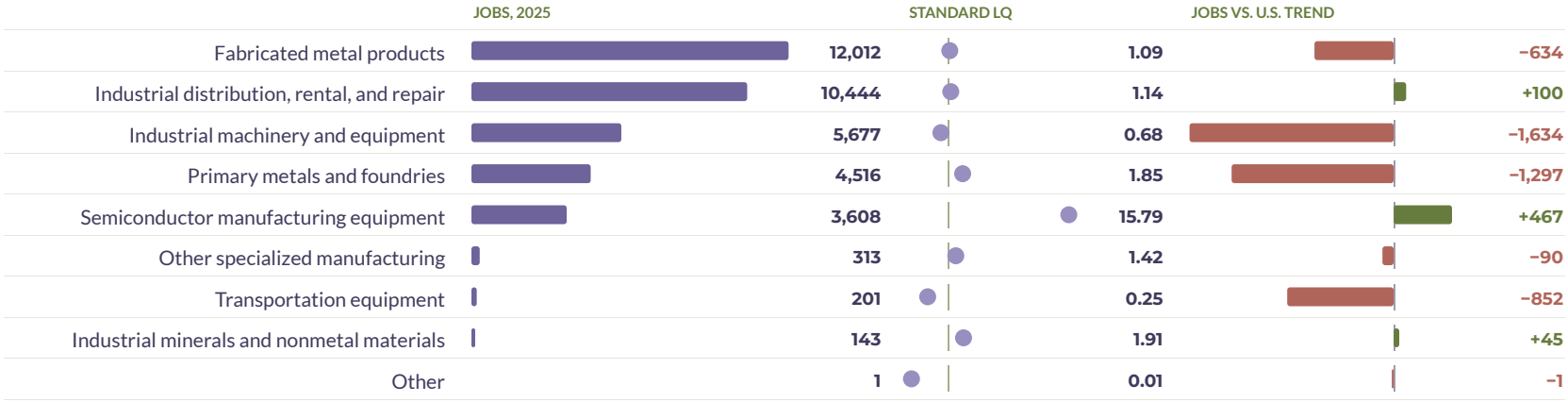
CLUSTER PROFILE

Metals & Machinery

Semiconductor equipment and industrial services are growing inside a contracting production base.

Traditional metals contracted while semiconductor equipment grew.

Industrial distribution and semiconductor equipment gained; primary metals and machinery contracted.



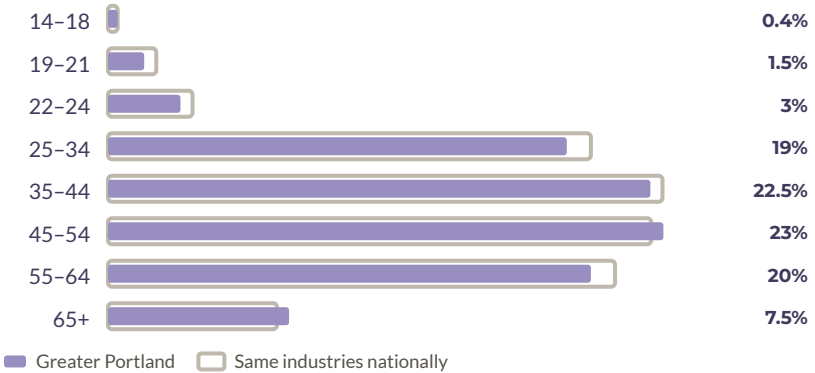
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
36,915	−2,352 -6.0%	−4,052 −9.9%	1.11	−3,896	1,804

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

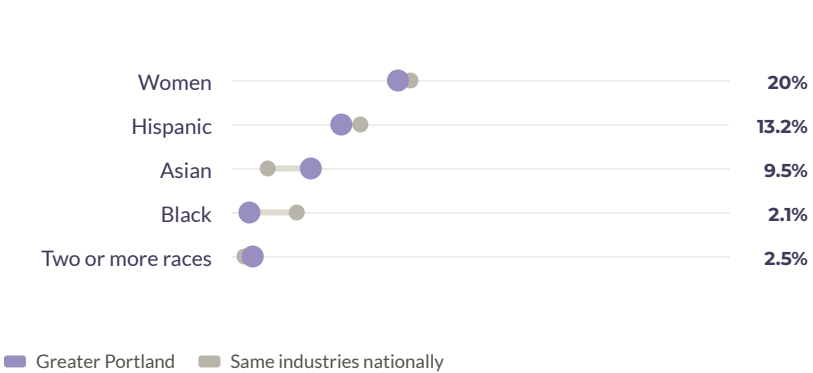
The region's broadest production cluster relies on an older, predominantly male workforce.

The cluster matches its national sector on diversity overall, but Black workers are 2.1% against 7.8% nationally. Two-thirds of jobs list high school as the typical entry requirement.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
27.7%
share of cluster employment

WOMEN
20%
−1.5pp vs. national sector

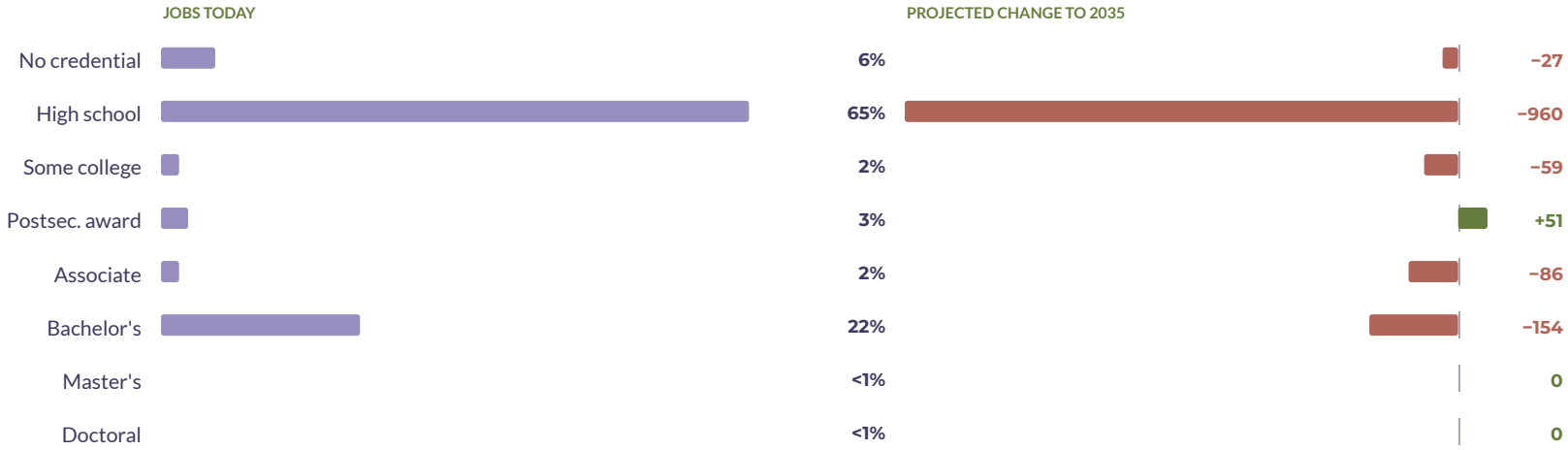
WORKERS OF COLOR
28%
−1.5pp vs. national sector

BELOW A BACHELOR'S
78%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Seventy-eight percent of jobs are in occupations typically entered below a bachelor's degree.

This is the most accessible skilled-trades base in the traded portfolio.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
78%	22%	$118,226	29%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Retirement exposure remains high even as employment is projected to decline.

AGE-RELATED EXPOSURE

27.7% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

10,303 hires

10,550 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

−3.3%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Metals & Machinery produces 18% more output per worker than U.S. industries, while 44% of modeled inputs come from outside the region.

VALUE CREATED

OUTPUT PER WORKER
$212,906
+18.3% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$118,226
−4.7% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.11 LQ
Near or modestly above the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
60.1%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
44.4%
$4,814M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

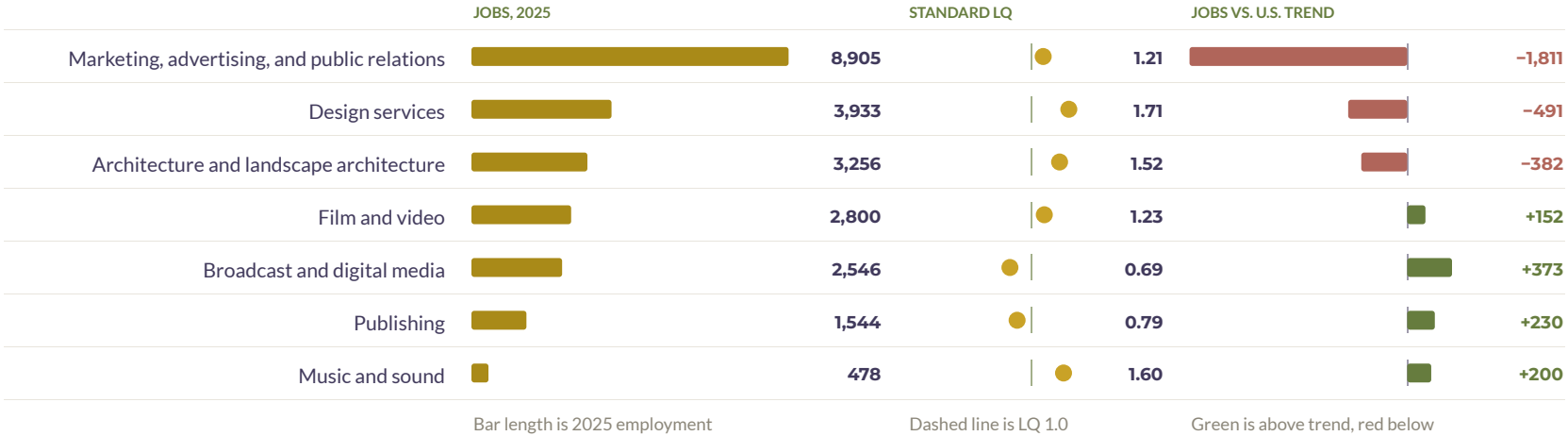
CLUSTER PROFILE

Design & Media

Digital media and sound are gaining while commercial creative services contract.

Digital media and music grew. Losses in marketing, design and publishing were larger.

Broadcast and digital media and music gained national ground; commercial creative services fell.



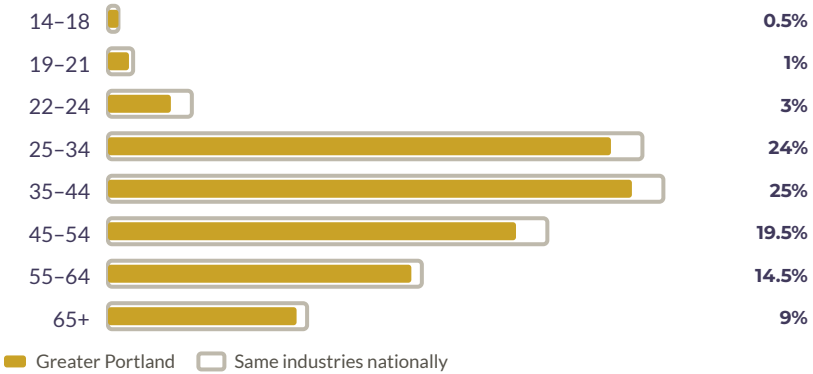
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
23,462	−870 -3.6%	−1,691 −6.7%	1.17	−1,729	4,034

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

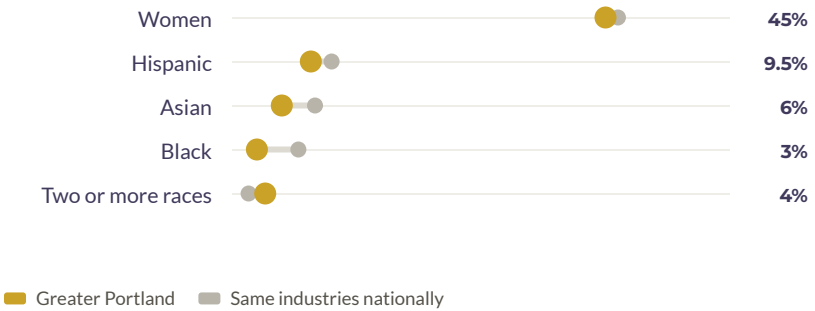
Design & Media is degree-intensive and less racially diverse than the same industries nationally.

Workers of color are 23% of the cluster against 33% in the same industries nationally. Asian representation is 6% against 10%. Three-quarters of jobs are in occupations typically entered with a bachelor's degree.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
23.5%
share of cluster employment

WOMEN
45%
−1.5pp vs. national sector

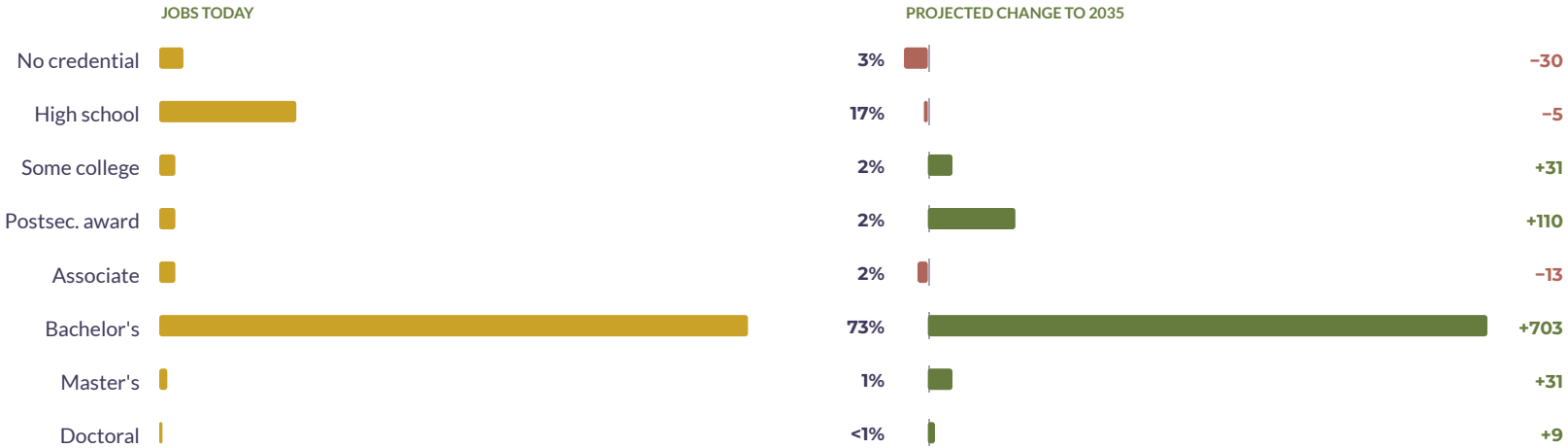
WORKERS OF COLOR
23%
−9.5pp vs. national sector

BELOW A BACHELOR'S
26%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Seventy-four percent of jobs are in occupations typically entered with a bachelor's degree.

Twenty-six percent of the cluster sits below a bachelor's, and the projected additions are concentrated at degree level.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
26%	74%	$111,597	42%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

High separations point to a fluid creative-services market, not a proven worker surplus.

AGE-RELATED EXPOSURE

23.5% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

9,479 hires

9,851 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+3.6%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Design & Media produces 26% less output per worker than U.S. industries, and cost-adjusted earnings trail by 42%.

VALUE CREATED

OUTPUT PER WORKER
$227,474
−25.9% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$111,597
−41.5% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
1.17 LQ
Near or modestly above the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
27.8%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
35.8%
$3,412M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

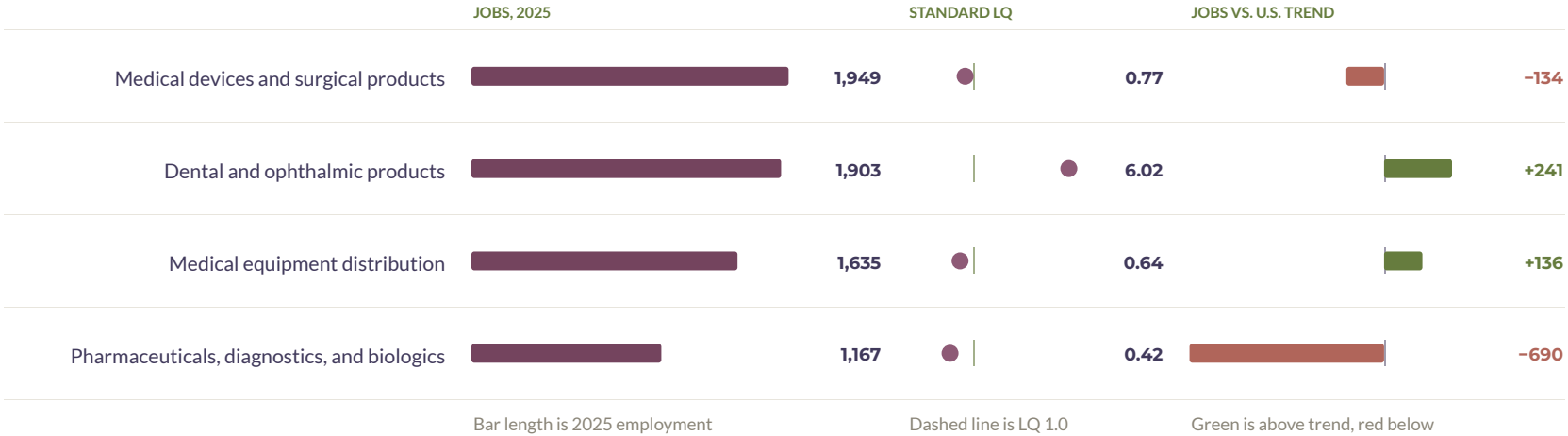
CLUSTER PROFILE

Life Sciences & Medical Devices

Dental products and distribution are growing inside a cluster that remains less concentrated than the nation.

Dental products and distribution drove Life Sciences growth; pharmaceuticals contracted.

The cluster added 870 jobs on a small base and remains less concentrated than the nation.



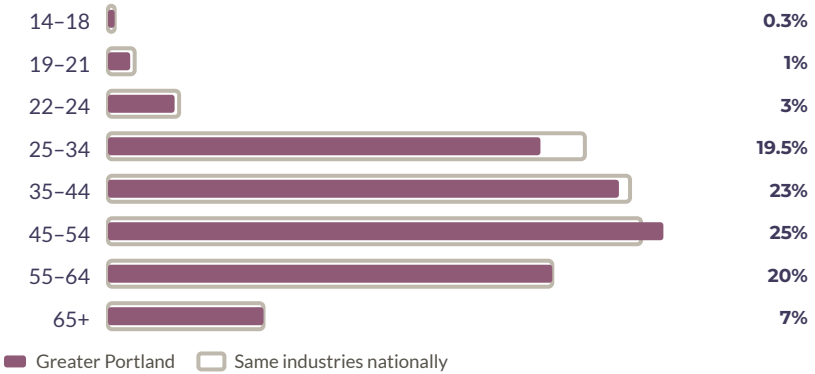
JOBS, 2025	CHANGE, 2015–2025	CHANGE, 2019–2025	STANDARD LQ, 2025	JOBS VS. U.S. TREND	ESTABLISHMENTS
6,653	+870 +15.0%	+267 +4.2%	0.82	−447	443

Cluster overlaps are retained here because they describe an ecosystem. Overall portfolio totals are deduplicated. Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

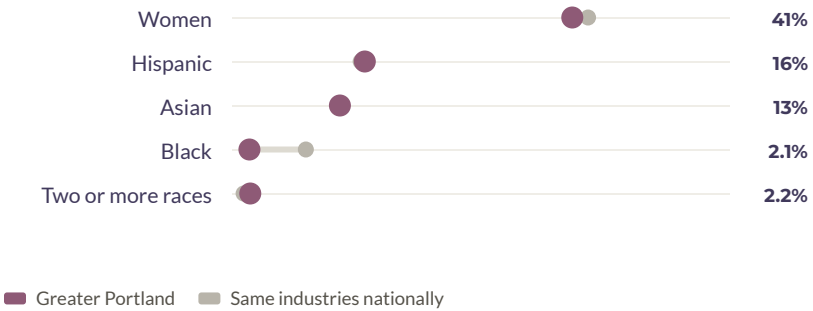
Life Sciences & Medical Devices has an older workforce and very low Black representation.

Black workers are 2.1% of the cluster; the national sector figure is 8.9%. Hispanic representation is 16%, above the national sector. Twenty-seven percent of workers are 55 or over.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
27.4%
share of cluster employment

WOMEN
41%
−1.9pp vs. national sector

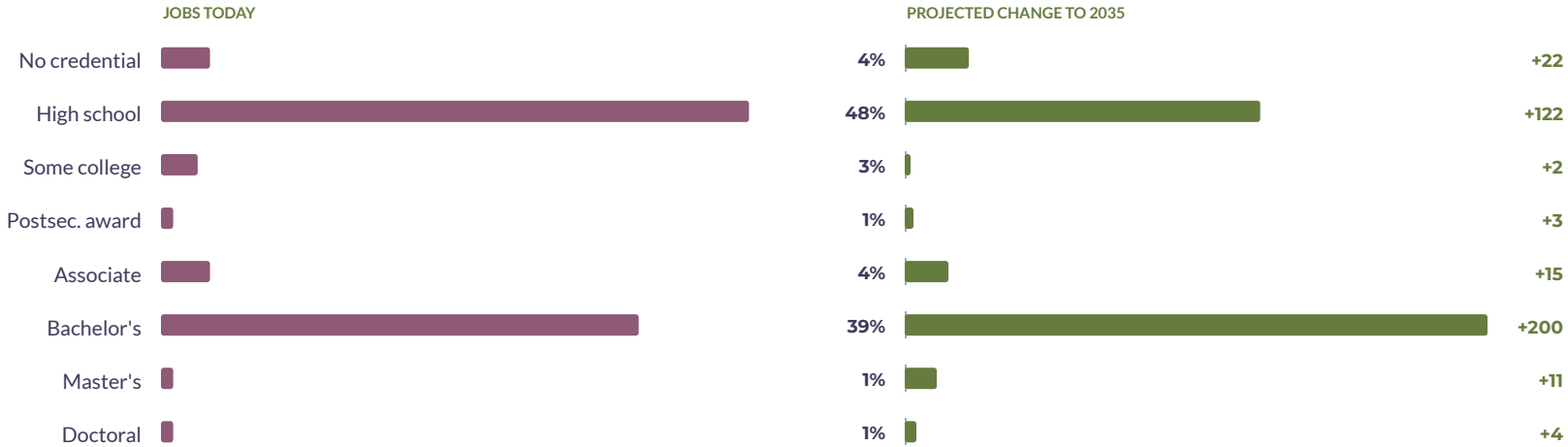
WORKERS OF COLOR
35%
−4.8pp vs. national sector

BELOW A BACHELOR'S
59%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Life Sciences & Medical Devices combines sub-bachelor production and distribution roles with degree-level technical work.

Fifty-nine percent of jobs sit below a bachelor's, concentrated in device manufacturing and distribution rather than research.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
59%	41%	$120,636	25%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Twenty-seven percent of a 6,653-job Life Sciences workforce is age 55 or older.

AGE-RELATED EXPOSURE

27.4% age 55+

A directional signal of retirement exposure, not a forecast of exits.

2025 HIRING FLOWS

1,588 hires

1,679 separations. The balance does not measure worker shortage or surplus.

PROJECTED EMPLOYMENT

+5.7%

A modeled baseline to test with employers, not a staffing commitment.

AI AND AUTOMATION

Not estimated

Occupation-level task exposure is required to separate job redesign from displacement.

Source: CivicSol analysis of Lightcast 2026.3 data. Retirement and technology exposure require employer and occupation-level validation.

Life Sciences & Medical Devices sources 71% of modeled inputs outside the region, the portfolio's highest share.

VALUE CREATED

OUTPUT PER WORKER
$261,120
−31.4% vs. the same U.S. industries

COST-ADJUSTED EARNINGS
$120,636
−39.3% vs. the same U.S. industries

EMPLOYMENT CONCENTRATION
0.82 LQ
Below the U.S. average

MARKET AND INPUTS

MODELED SALES OUTSIDE THE REGION
58.1%
A market-orientation indicator, not a company-level export count

MODELED INPUTS SOURCED OUTSIDE
70.9%
$2,851M in modeled purchases

SUPPLIER-DEVELOPMENT READING
Screen
The opportunity depends on buyer specifications, recurring demand and local supplier capacity

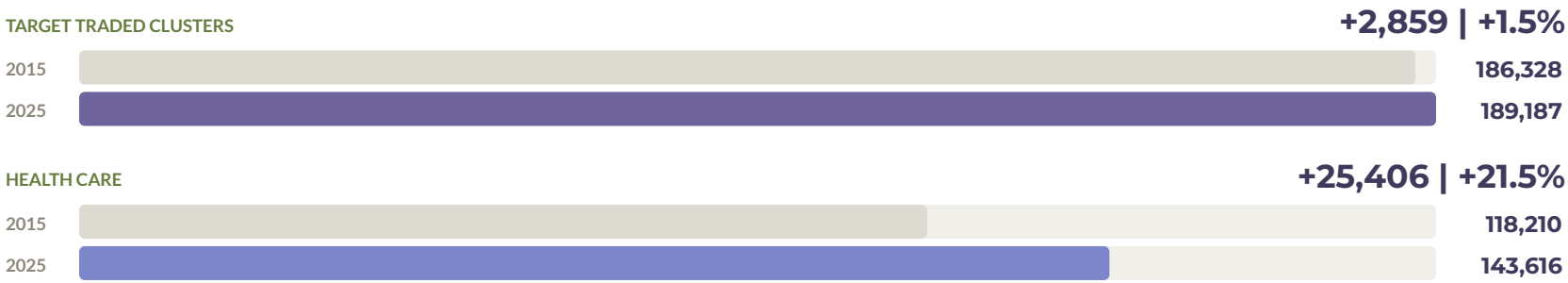
Export shares are exported dollars divided by total modeled sales. Source: CivicSol analysis of Lightcast 2026.3 data.

CLUSTER PROFILE

Health care

A separate regional workforce system: large, fast-growing and shaped by local demand, access and talent.

Health Care added 25,406 jobs while the target traded portfolio added 2,859, but they are different economic systems.



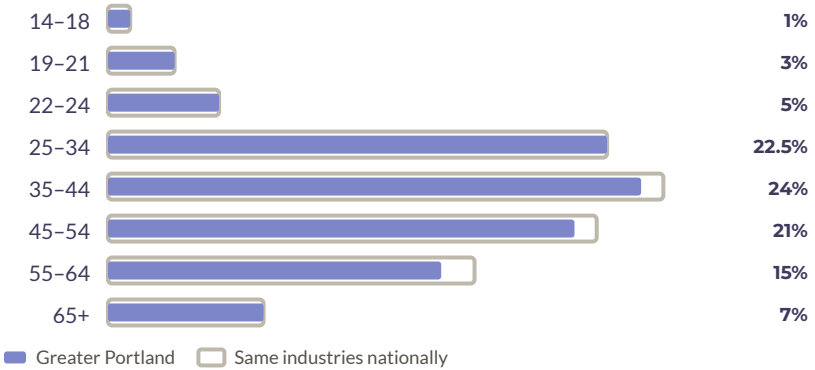
The contrast establishes why Health Care belongs in its own chapter rather than inside the traded-sector portfolio total. Since 2019 the gap has widened: Health Care added 15,167 jobs while the eight target clusters lost 12,180.

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

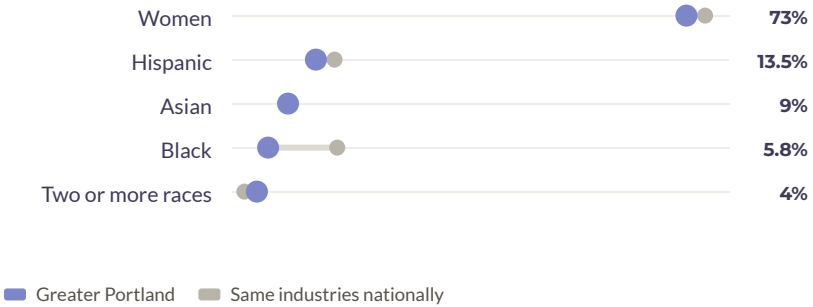
Health Care is three-quarters women; racial representation differs from national care industries.

Black workers are 5.8% of the cluster against 16.9% nationally, the widest single representation gap in the portfolio. Nine percent of workers are under 25, the youngest intake anywhere.

AGE PROFILE



REPRESENTATION VS. THE SAME INDUSTRIES NATIONALLY



AGED 55 AND OVER
22.0%
−2.1pp vs. national sector

WOMEN
73%
−3.0pp vs. national sector

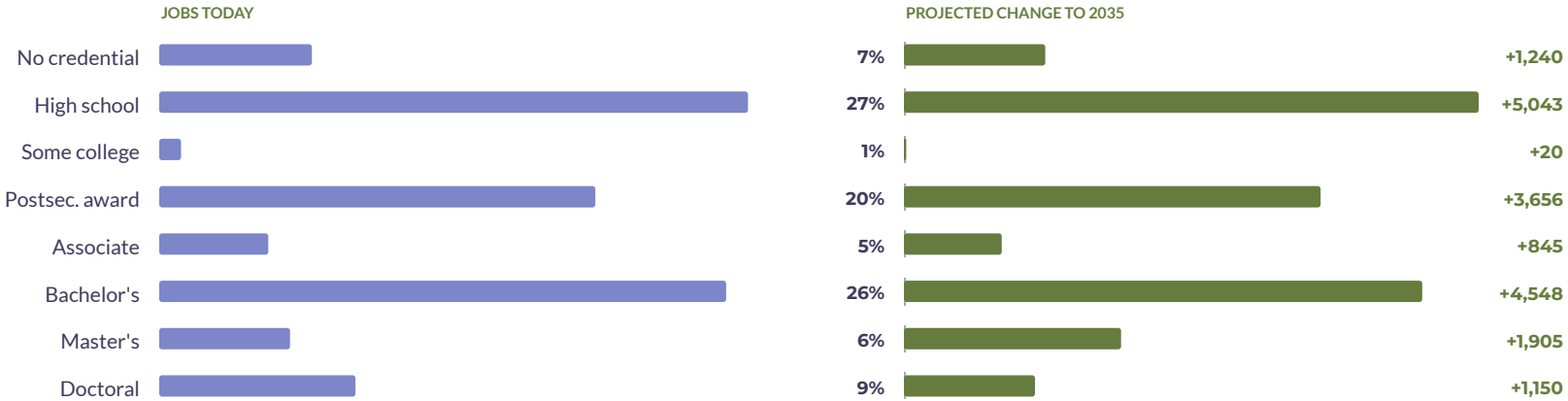
WORKERS OF COLOR
33%
−11.2pp vs. national sector

BELOW A BACHELOR'S
59%
of jobs by typical entry requirement

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Health Care is projected to add jobs across every typical education level.

Fifty-nine percent of jobs sit below a bachelor's. Projected growth adds 5,043 at high-school level and 3,656 at postsecondary award level.



BELOW A BACHELOR'S	BACHELOR'S OR ABOVE	AVERAGE EARNINGS	ANNUAL SEPARATIONS
59%	41%	$99,082	46%

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Age-related exits and continued growth point to sustained Health Care hiring pressure.

EMPLOYMENT GROWTH

+21.5%

Health Care added 25,406 jobs over the decade.

AGE PROFILE

22.0% age 55+

A retirement-exposure signal, not a forecast of specific exits.

PROJECTED GROWTH

+12.8%

A modeled baseline that should be tested against provider hiring plans.

EVIDENCE NEEDED

Occupation-level

Openings, credentials, completions, commuting, retention and employer-reported vacancies.

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Health Care produces more output per worker than U.S. care industries and serves regional demand.

EMPLOYMENT CONCENTRATION

0.89 LQ

Below the U.S. average as a share of total regional employment.

OUTPUT PER WORKER

$114,060

+9.1% versus U.S. care industries.

COST-ADJUSTED EARNINGS

$99,082

−9.8% versus U.S. care industries.

MODELED SALES OUTSIDE REGION

19.5%

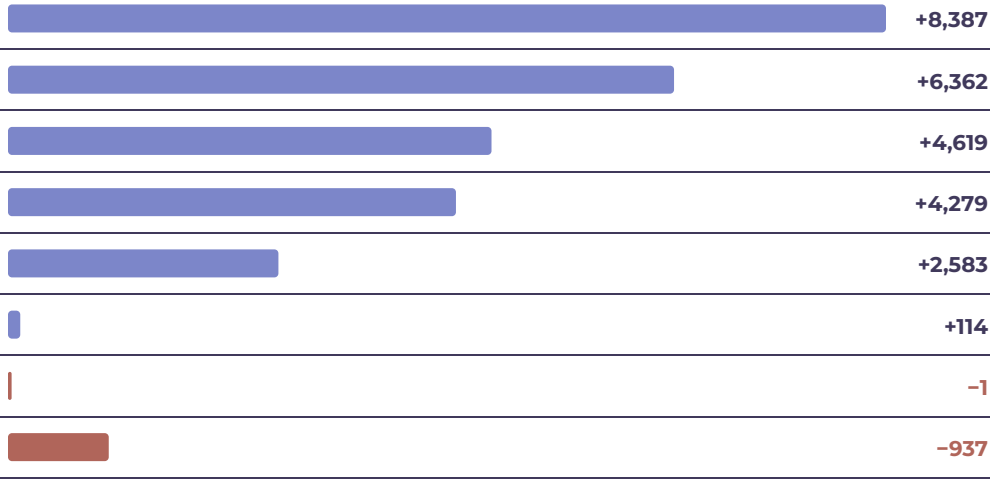
Health Care is local-serving, with some activity beyond the region.

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Residential and behavioral health drove more job growth than hospitals.

Employment change by Health Care subsector, 2015–2025. Health Care remains a separate local-serving system.

	JOBS, 2025	JOB CHANGE, 2015–2025
Physician and ambulatory care	52,852	+8,387
Senior and residential care	31,120	+6,362
Hospitals	34,739	+4,619
Behavioral health	11,147	+4,279
Home, community, and emergency care	6,895	+2,583
Diagnostics, imaging, blood, and organ services	3,014	+114
Government hospitals	0	−1
Health retail, equipment, and support	3,850	−937



Care growth extends beyond hospitals. The fastest expansion occurred across ambulatory, residential, behavioral and community settings.

Source: CivicSol analysis of Lightcast 2026.3 data.

Health Care will drive local employment growth, but it does not play the same role as traded industries.

SCALE

One of the region's largest economic systems

143,616 jobs make Health Care one of Greater Portland's largest economic systems, and it added 15,167 of them since 2019 while the target clusters were contracting. Its growth has broad implications for employers, households, workforce partners and local institutions.

WORKFORCE

Growth spans credentials, care settings and occupations

Age exposure, provider demand, retention and training capacity must be examined at the occupation and care-setting level.

PORTFOLIO ROLE

Health Care remains outside the traded target total

Its primary market is regional. The system deserves a full chapter without being used as evidence of traded-sector momentum.

Source: CivicSol analysis of Lightcast 2026.3 data.

SECTION 2 · WORKFORCE

A deeper dive into workforce

Who works in the target clusters, how they enter, who is leaving, who is missing, and what the work pays.

02

Exposure is concentrated in the corporate and technical work, not the production floor.

Across the traded clusters the spread runs from 6.70 to 4.55, and it sorts by task, not by cluster.

MOST EXPOSED

6.70	Other services related to advertising
6.60	Marketing consulting services
6.57	Computing infrastructure and data processing

LEAST EXPOSED

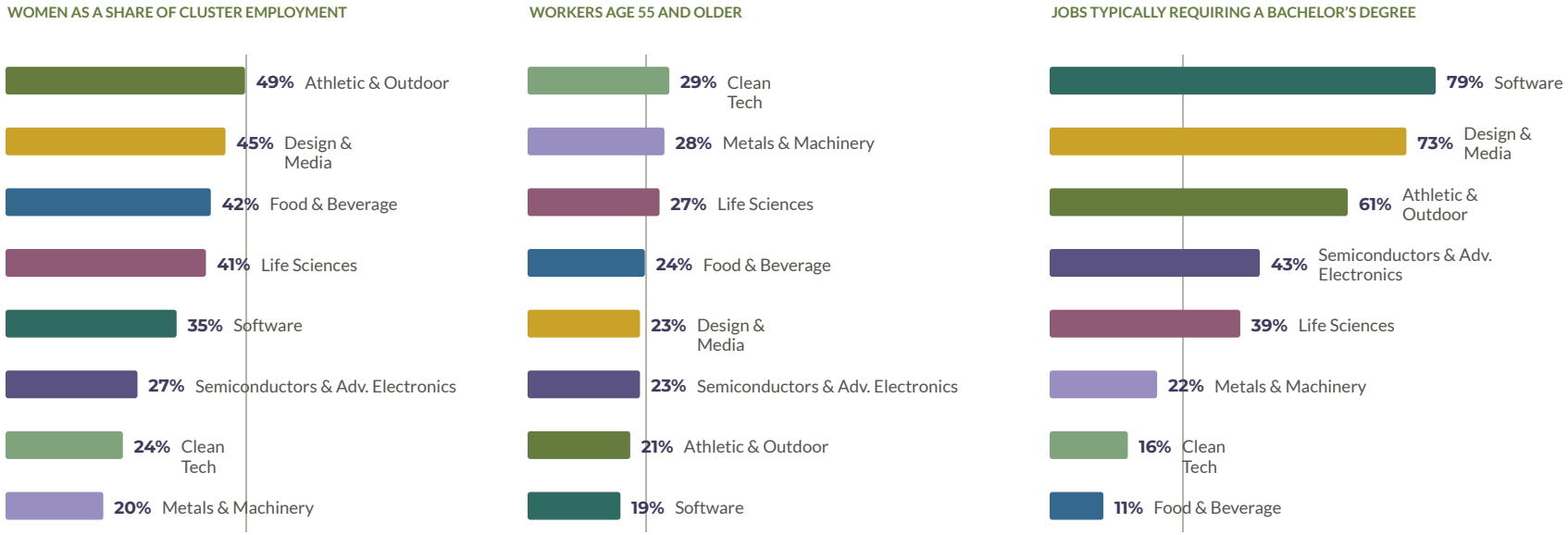
4.55	Ship building and repairing
4.86	Solid waste collection
5.19	Machine shops

6.51 **Footwear manufacturing sits with advertising and software.**
Its postings are design, sourcing and brand roles, not production. The exposure follows the task, not the industry label.

Six-digit NAICS industries inside the eight traded target clusters with at least 150 postings over twelve months. Health Care scores lower still: its five lowest care settings run 4.00 to 4.27. Exposure is scored 0 to 10 and reflects the task content of the postings, not projected job loss. Source: Lightcast AI exposure data supplied to CivicSol.

The portfolio spans different workforce systems, not one regional talent market.

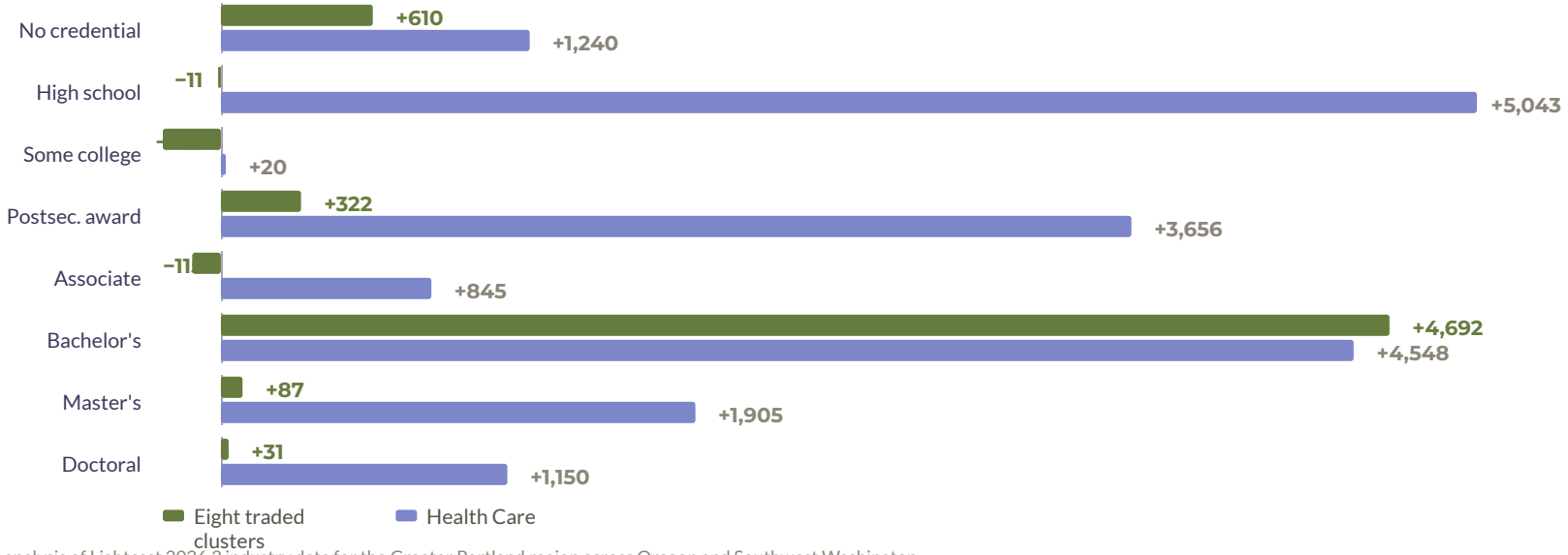
Women hold 73% of Health Care jobs and 20% of Metals & Machinery jobs. Dashed line is the regional average.



Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Projected traded-sector growth is concentrated in occupations typically entered with a bachelor's degree.

Of 5,384 projected net target jobs through 2035, 4,692 are in occupations typically entered with a bachelor's degree. Health Care adds 5,043 in occupations typically entered with a high school diploma.



Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Retirement exposure is highest in Clean Tech and Metals & Machinery, and lowest in Software.

Share of workforce age 55 or older. This is a directional exposure measure, not a forecast of departures.



Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Share of workers age 55 and older, by cluster.

This is a directional exposure measure, not a forecast of departures.

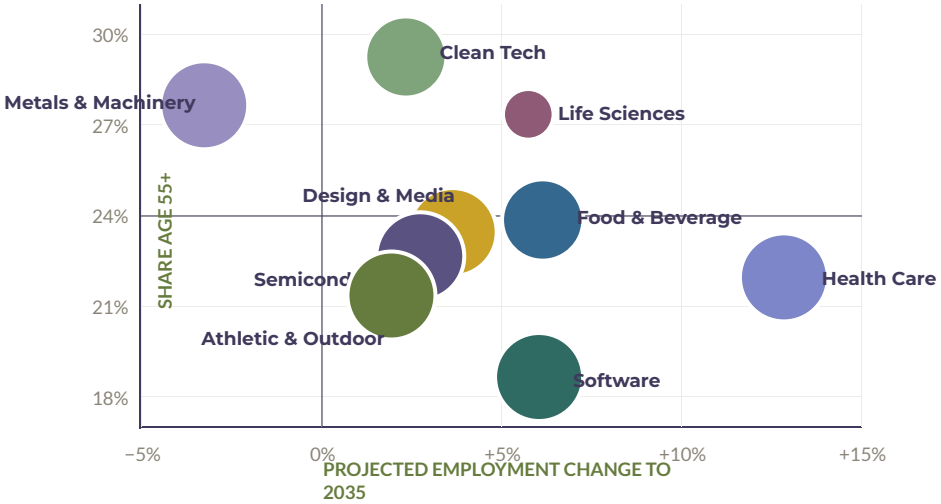


The engagement question is where aging intersects with occupations, succession risk, retention and expected demand, not how many workers a model says the region must replace.

Source: CivicSol analysis of Lightcast 2026.3 data.

Retirement exposure and projected growth create four distinct workforce challenges.

Bubble size shows 2025 employment. Dashed lines mark zero projected growth and the 24% regional average for workers age 55 and older.



Shrinking and aging

Metals & Machinery combines the largest retirement exposure with a projected employment decline.

Growing and aging

Health Care, Clean Tech and Life Sciences & Medical Devices carry high retirement exposure into growth, so replacement and expansion compete.

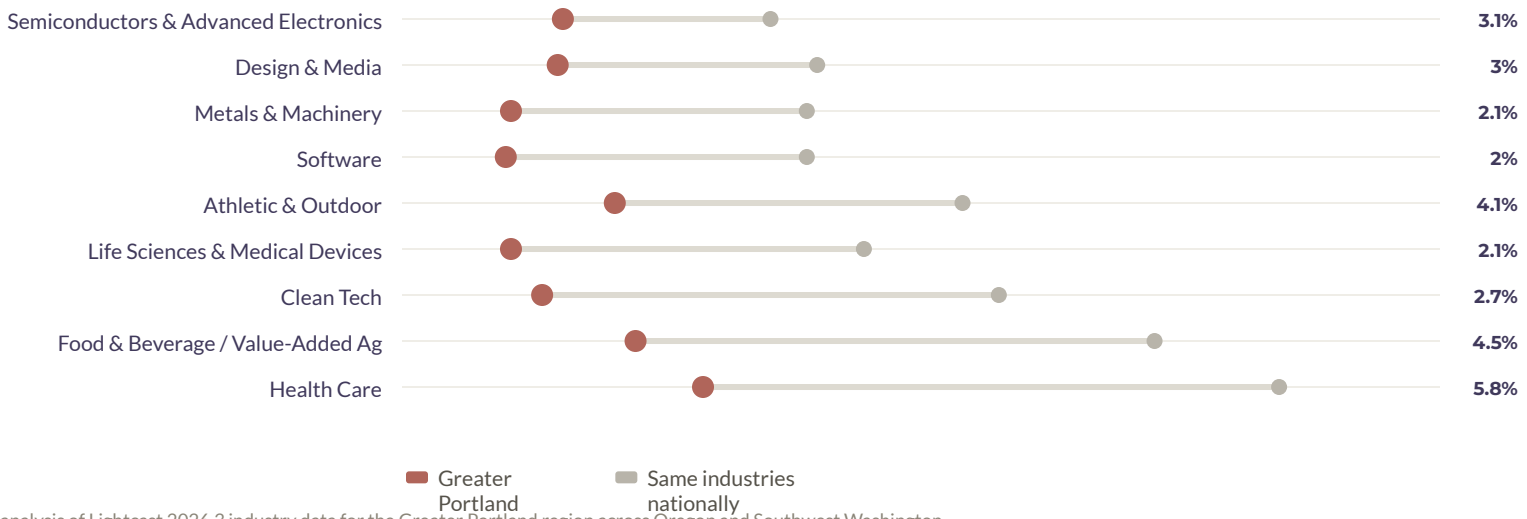
Younger, with hiring pressure

Software and Semiconductors have younger workforces and face technical hiring, retention and replacement needs.

Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

Black representation trails national sector patterns across the portfolio.

The gap runs from 4 points in Semiconductors to 11 points in Health Care. Greater Portland's workforce is less diverse than the nation, which accounts for part of it.

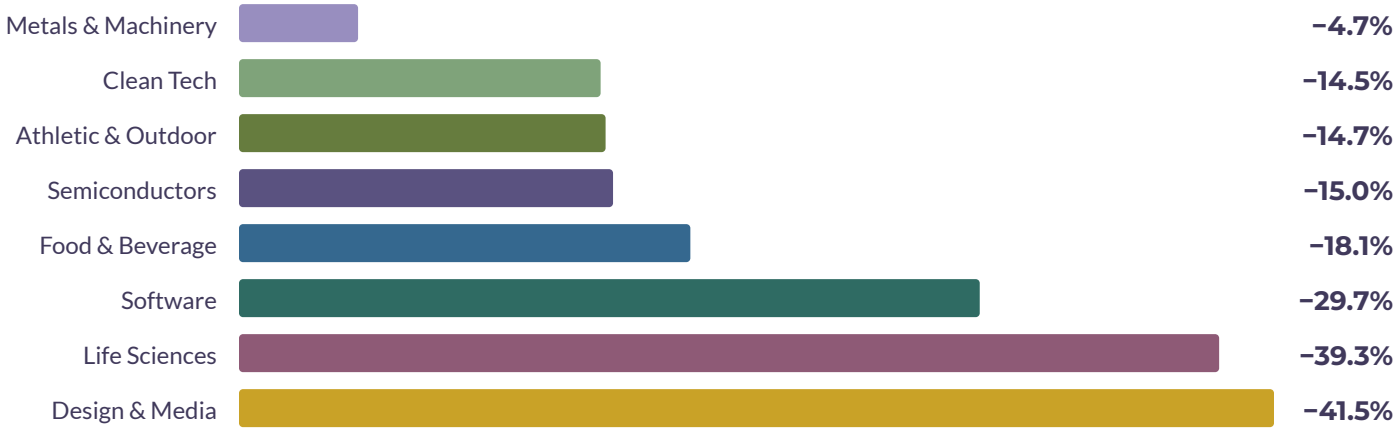


Source: CivicSol analysis of Lightcast 2026.3 industry data for the Greater Portland region across Oregon and Southwest Washington.

EARNINGS AFTER LIVING COSTS

Cost-adjusted earnings trail U.S. industries most in Design & Media, Life Sciences and Software.

Average earnings per job versus the same industries nationally, adjusted for regional cost differences.



Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Higher output per worker does not guarantee higher cost-adjusted earnings.

All comparisons use the same industries nationally. Earnings are adjusted for regional cost differences.

CLUSTER	OUTPUT PER WORKER VS. U.S.	COST-ADJUSTED EARNINGS VS. U.S.
Software	+20.2%	−29.7%
Metals & Machinery	+18.3%	−4.7%
Athletic & Outdoor	+5.9%	−14.7%
Clean Tech	+5.2%	−14.5%
Semiconductors & Advanced Electronics	+4.5%	−15.0%
Food & Beverage / Value-Added Ag	−6.1%	−18.1%
Design & Media	−25.9%	−41.5%
Life Sciences & Medical Devices	−31.4%	−39.3%

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

SECTION 3 OF 3

Technical appendix

How the analysis was built: cluster selection, analytical rules, glossary and full subsector source tables.

03

Definitions for the measures used throughout the report.

Traded industry
An industry that sells a meaningful share of goods or services beyond the region.

GRP
Gross regional product: the value added by regional production.

Average earnings
Wages, salaries, supplements and proprietor income per job, where applicable.

Imported input
Modeled buyer spending met by suppliers outside Greater Portland.

Typical entry education
The national education category typically associated with an occupation, not an employer requirement.

Location quotient
A region's industry employment share divided by the U.S. share.

Output per worker
GRP divided by jobs. It is not a direct measure of worker productivity.

Establishment
A physical operating location. One firm may have multiple establishments.

Exported sales
Modeled sales to buyers outside Greater Portland.

Retirement exposure
A directional age-based screen, not a forecast of who will exit or when.

Source: CivicSol analysis of Lightcast 2026.3 data.

CLUSTER OVERLAP

Seven subsectors appear in more than one target cluster because they serve multiple production systems.

333243	Sawmill, Woodworking, and Paper Machinery Manufacturing	Clean Tech + Metals & Machinery
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	Clean Tech + Metals & Machinery
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	Clean Tech + Metals & Machinery
335910	Battery Manufacturing	Clean Tech + Semiconductors & Advanced Electronics
333242	Semiconductor Machinery Manufacturing	Semiconductors & Advanced Electronics + Metals & Machinery
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	Semiconductors & Advanced Electronics + Life Sciences & Medical Devices
516210	Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers	Design & Media + Software

Source: CivicSol analysis of Lightcast 2026.3 data and supplied Greater Portland cluster datasets.

Semiconductors & Advanced Electronics: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Semiconductor devices	26,728	−0.5%	17.35	−2,619
Semiconductor manufacturing equipment	3,608	+97.9%	15.79	+467
Measurement, control, and analytical instruments	3,543	−12.9%	1.38	−540
Electronic components and assemblies	2,932	−1.0%	1.84	−24
Computing, communications, and consumer electronics	1,519	−37.8%	0.79	−301
Electromedical equipment	422	−33.3%	0.75	−349
Battery manufacturing	401	+74.6%	0.83	−141
Space and propulsion electronics	0	—	—	0

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Athletic & Outdoor: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Corporate management offices (corporate proxy)	38,511	+6.5%	1.98	−4,417
Marine and recreation equipment	2,203	+12.5%	1.36	+271
Materials, textiles, and printing	1,097	−20.7%	0.90	−153
Apparel and footwear production	963	−24.7%	1.01	+66
Sporting goods distribution	574	−32.8%	1.14	−443
Fishing and marine harvest	125	−66.6%	0.67	−142

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Food & Beverage / Value-Added Ag: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Bakeries, pasta, and coffee	5,480	+13.8%	1.69	−427
Frozen, preserved, and prepared foods	4,194	−0.7%	1.53	−1,262
Beverages	3,932	+60.0%	1.55	+17
Confectionery and snacks	1,446	+37.0%	1.36	+106
Meat and seafood processing	1,406	+62.4%	0.53	+360
Milling, grains, oils, and sugar	934	+33.5%	1.81	+224
Dairy and frozen desserts	807	−15.9%	0.63	−267
Food and beverage packaging	85	−55.6%	1.05	−52
Tobacco	5	+1.0%	0.06	+1

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Software: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Software products	10,198	+33.8%	2.01	−4,709
Systems integration and managed IT	8,855	−10.2%	0.80	−3,106
Custom software development	7,164	+25.6%	0.81	−31
Cloud and data infrastructure	5,245	+68.1%	1.35	+119
Digital platforms and content networks	1,743	+12.1%	0.89	+39

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Clean Tech: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Circular economy and environmental services	4,608	+51.2%	1.10	+526
Wood products and mass timber	4,029	+0.3%	1.21	−132
Wood and furnishing distribution	2,932	+9.9%	1.66	−22
Furniture and interior products	2,512	+0.1%	1.20	+187
Pulp, paper, and packaging	2,362	−25.7%	0.93	−564
Building systems and batteries	1,116	+6.2%	0.75	−205
Clean power and grid infrastructure	646	−38.7%	1.14	−678

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Metals & Machinery: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Fabricated metal products	12,012	−7.7%	1.09	−634
Industrial distribution, rental, and repair	10,444	+17.7%	1.14	+100
Industrial machinery and equipment	5,677	−19.9%	0.68	−1,634
Primary metals and foundries	4,516	−30.0%	1.85	−1,297
Semiconductor manufacturing equipment	3,608	+97.9%	15.79	+467
Other specialized manufacturing	313	−30.3%	1.42	−90
Transportation equipment	201	−86.2%	0.25	−852
Industrial minerals and nonmetal materials	143	+31.1%	1.91	+45
Other	1	−40.4%	0.01	−1

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Design & Media: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Marketing, advertising, and public relations	8,905	−5.7%	1.21	−1,811
Design services	3,933	−6.7%	1.71	−491
Architecture and landscape architecture	3,256	+1.2%	1.52	−382
Film and video	2,800	−2.6%	1.23	+152
Broadcast and digital media	2,546	+33.3%	0.69	+373
Publishing	1,544	−37.5%	0.79	+230
Music and sound	478	+140.9%	1.60	+200

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Life Sciences & Medical Devices: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOBS VS. U.S. TREND
Medical devices and surgical products	1,949	+4.0%	0.77	−134
Dental and ophthalmic products	1,903	+16.6%	6.02	+241
Medical equipment distribution	1,635	+81.9%	0.64	+136
Pharmaceuticals, diagnostics, and biologics	1,167	−15.4%	0.42	−690

Cluster profiles retain intentional overlap; regionwide portfolio totals count each industry once.

Source: CivicSol analysis of Lightcast 2026.3 data.

Health Care: Subsectors

SUBSECTOR	JOBS, 2025	2015–25 GROWTH	STANDARD LQ	JOB CHANGE
Physician and ambulatory care	52,852	+18.9%	1.09	+8,387
Hospitals	34,739	+15.3%	0.80	+4,619
Senior and residential care	31,120	+25.7%	1.25	+6,362
Behavioral health	11,147	+62.3%	1.45	+4,279
Home, community, and emergency care	6,895	+59.9%	0.40	+2,583
Health retail, equipment, and support	3,850	−19.6%	0.59	−937
Diagnostics, imaging, blood, and organ services	3,014	+3.9%	0.92	+114
Government hospitals	0	−100.0%	—	−1

Health Care is a separate regional system; these rows describe care settings, not traded-sector performance.

Source: CivicSol analysis of Lightcast 2026.3 data.


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