

Target Cluster Profiles

High Tech

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High Tech is a small sector in terms of the number of firms operating in Clackamas County, but these sectors have high direct economic impacts, multipliers that have considerable spillover effects, and average wages well over the regional average. The sector employs over 3,100 employees across the county. High-tech products manufactured in the county include semiconductors, computer equipment, circuit boards, circuit assemblies, navigation systems, and batteries.



NAICS 334: Computer and Electronic Products

There are only 18 firms in this sector in Clackamas County, but 10 of them employ over 100 employees. International firms like Xerox, Tyco, and Shimadzu are key anchors.



NAICS 335: Electrical Equipment, Appliances, and Components

There are only a few of firms in this sector, but they are all medium to large-scale companies. Eaton and Johnson Controls highlight this sector.

Economic Impacts (dollars in millions)

Firms in the anchor sectors of **High Tech** employ over 3,150 employees in Clackamas County. The annual direct contribution to the local economy is **\$735 million dollars in value-added output**. Secondary effects contribute an additional 3,880 jobs and \$462 million in value-added output.

Impacts	Jobs	Labor Income	Value Added	Output
Direct	3,150	\$391.2	\$735.6	\$1,953.4
Indirect	2,500	\$219.2	\$312.6	\$567.6
Induced	1,380	\$82.2	\$150.0	\$246.4
Total	7,030	\$692.6	\$1,198.2	\$2,767.4

Major Employers

- Xerox
- Micro Systems
- Tyco
- Shimadzu
- Eaton
- Johnson Controls
- Rockwell Collins
- Flir Systems

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The **High Tech** cluster relies on **57 different goods and service categories** in a production function that allows it to support over \$1.95 billion dollars in annual economic output and **\$735 million in value-added output.**

High Tech inputs include a relatively diverse range of products and services that includes corporate management, professional and technical services, other computer and electronics components and machinery, and electronics wholesaling services. Of the \$875 million in commodity inputs that support this output, **23.9 percent** is cross spending across other parts of the sector.

Key Industries by Gross Inputs

Gross Inputs are the goods and services that make up the production function that produces another good or service, *regardless of where these inputs are sourced.* In the **High Tech** Cluster, the top 20 inputs represent **94.3% of all production inputs and the top 5 inputs represent 73.8 percent of all inputs.** Inputs generally include computer and electronic components, mostly semiconductors and related equipment, circuit assemblies, electronic components, chemicals, and computer programming.

TOP SECTORS	GROSS INPUT (millions)
Computer and Electronic Product Manufacturing	\$203.8
Management of Companies and Enterprises	\$180.8
Merchant Wholesalers, Durable Goods	\$119.0
Professional, Scientific, and Technical Services	\$96.8
Fabricated Metal Product Manufacturing	\$45.7
Administrative and Support Services	\$25.6
Warehousing and Storage	\$21.8
Utilities	\$19.6
Truck Transportation	\$19.1
Chemical Manufacturing	\$18.3
Plastics and Rubber Products Manufacturing	\$17.4
Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services	\$9.8
Insurance Carriers and Related Activities	\$7.3
Repair and Maintenance	\$6.9
Primary Metal Manufacturing	\$6.7
Merchant Wholesalers, Nondurable Goods	\$6.2
Electrical Equipment, Appliance, and Component Manufacturing	\$5.7
Transportation Equipment Manufacturing	\$5.3
Wood Product Manufacturing	\$5.3
Wholesale Trade Agents and Brokers	\$4.8

SOURCE: IMPLAN and ECONorthwest

High Tech

Firms in the **High Tech** sector support a broad range of other sectors within the Clackamas County economy. Across all inputs that support **High Tech**, **42 percent** of production inputs are purchased within the County.



Local Absorption Rate

Inputs that are large parts of the overall production function and have high rates of local purchase are core elements of what makes up a cluster. In **High Tech** these include:

Example Local Inputs with High Regional Purchase Coefficients (RPC)

- 54.0%** Corporate Functions (Management of Cos.)
- 94.7%** Durable Good Wholesalers
- 94.4%** Custom Computer Programming
- 55.4%** Industrial Gases
- 71.5%** Data Processing

Key Industries by Regional Inputs

Regional inputs are the goods and services that make up a production function but *are purchased locally within the local economy*. In the **High Tech** Cluster, the largest regional inputs include a mix of corporate management, wholesaling, logistics, technical services, and raw materials including fabricated metals and chemicals.

TOP SECTORS	REGIONAL INPUT (millions)	GROSS INPUT (millions)
Management of Companies and Enterprises	\$97.6	\$180.8
Merchant Wholesalers, Durable Goods	\$87.0	\$119.0
Professional, Scientific, and Technical Services	\$70.3	\$96.8
Administrative and Support Services	\$22.0	\$25.6
Truck Transportation	\$16.7	\$19.1
Utilities	\$12.6	\$19.6
Computing Infrastructure Providers, Data Processing, Web Hosting	\$7.0	\$9.8
Repair and Maintenance	\$6.5	\$6.9
Warehousing and Storage	\$6.1	\$21.8
Insurance Carriers and Related Activities	\$5.7	\$7.3
Merchant Wholesalers, Nondurable Goods	\$5.7	\$6.2
Wholesale Trade Agents and Brokers	\$4.7	\$4.8
Chemical Manufacturing	\$3.4	\$18.3
Waste Management and Remediation Services	\$3.3	\$3.4
Fabricated Metal Product Manufacturing	\$3.2	\$45.6

SOURCE: IMPLAN and ECONorthwest