

Key Sector – Adv Manufacturing & Logistics

Edmonton’s Expertise

Nanotechnology & MEMS; Machinery Manufacturing

Selling Points for Edmonton

Specialities in Machinery Manufacturing: Machinery manufacturing is big business in Edmonton - representing 15 percent of Edmonton’s overall manufacturing sector (by business counts). There are approximately 274 companies working in machinery manufacturing in the Edmonton CMA, with the majority (45.6 percent) focused on agricultural, construction, and mining machinery.

Support for Growing Nano & Microelectromechanical Systems (MEMS) Technology: Nanotechnology is the manipulation of matter on an atomic, molecular, and supramolecular scale, whereas MEMs is the technology of microscopic devices, particularly those with moving parts. Edmonton has facilities and networks to support growth in the research and commercialization of these fields, including: the Alberta Centre for Advanced Microsystems and Nanotechnology Products (ACAMP); NanoFAB Centre; & National Institute for Nanotechnology (NINT).

Market Access through Air, Roads, and Rail: Edmonton is a designated Foreign Trade Zone and has the only direct full freighter service linking mainland China with Canada through Air China Cargo Ideally positioned in the middle of Western Canada and on major transportation corridors, Edmonton is the only major city that can access all major cities in Western Canada within 24 hours or less by highway/over the road vehicle(s). In terms of rail, CN’s Walker Yard, located in northern Edmonton is one of the largest rail yards in the West. It is also the first major urban supply centre along the northern line from the port at Prince Rupert, Canada’s closest deep water port to Asia.

Neato Facts/Stat

- 19 out of Alberta’s top 25 exported products for 2015 are from the manufacturing sector, with a total export value of \$16.89 billion

Comparison to Major Centres

Business Cost Comparison Ranking for Manufacturing¹					
(Higher Rank = Lower Cost)					
Cost	Edmonton	Calgary	Vancouver	Toronto	Montreal
Labour	2	5	1	4	3
Facility Lease	4	3	5	1	1
Taxes	2	1	3	2	5
Utilities	4	2	1	5	3
Overall Rank	4	5	3	2	1

Source: KPMG Competitive Alternatives, 2016

¹ Includes: Aerospace, Agri-Food, Automotive, Chemicals, Electronics, Green Energy, Medical Devices, Metal Components, Pharmaceuticals, Plastics, Precision Manufacturing, and Telecommunications.

**Gross Domestic Product - Compound Annual Growth Rate for Manufacturing
(2010-2015)**

	Edmonton	Calgary	Vancouver	Toronto	Montreal
CAGR	2.8%	1.2%	3.1%	2.1%	1.0%
Rank	2	3	1	4	5

Source: Conference Board of Canada, 2016

**Gross Domestic Product - Compound Annual Growth Rate for Transportation & Logistics
(2010-2015)**

	Edmonton	Calgary	Vancouver	Toronto	Montreal
CAGR	5.9%	4.3%	4.3%	2.5%	3.4%
Rank	1	3	2	5	4

Source: Conference Board of Canada, 2016

Industry Players

Karma Machining & Manufacturing Ltd.: Karma Machining & Manufacturing specializes in high speed CNC Milling and CNC Turning of complex components. They utilize the latest CAD & CAM software to produce custom machine parts and sub-assemblies for local, national, and international clients, large businesses as well as small. In addition they provide a rapid prototyping service using 3D printing techniques.

MetalBoss Technologies: Metalboss Technologies is an Edmonton-based company specializing in building, designing, and manufacturing fabricated metal products. MetalBoss has built and manufactured products for oil and gas, water and wastewater treatment facilities, mining operations, high-end retail outlets, and consumer electronics companies.

Micralyne: Micralyne is a microelectromechanical systems (MEMS) company with applications in biomed, optics, industrial sensors, and microfabrication. They create micro needles, molecular diagnostic tools, and microfluidic chips for use within the health care industry.

Norcada: Norcada is a microelectromechanical systems (MEMS) and photonic product company specialized in the development and manufacturing of MEMS devices and mid-IR DFB lasers for a wide range of industrial and scientific applications. Their products are fabricated using their proprietary membrane platform technology and are sold worldwide to high-tech companies, national labs and universities in more than 30 countries. Founded in 2001, Norcada has a state-of-the-art MEMS and photonics fabrication facility in Edmonton, Alberta.

Major Organizations & Assets

Alberta Centre for Advanced Microsystems and Nanotechnology Products (ACAMP): ACAMP is a not-for-profit organization that provides specialized services to micro and nano technology clients to help them commercialize. Services include: marketing & business development, product development, packaging and assembly, manufacturing, test and characterization.

National Institute for Nanotechnology (NINT): NINT is operated as a partnership between the National Research Council (NRC) and the University of Alberta, and is jointly funded by the Government of Canada, the Government of Alberta and the university. NINT is an integrated, multi-disciplinary institution involving researchers in physics, chemistry, engineering, biology, informatics, pharmacy and medicine. The 200,000 square metre facility is one of the most technologically advanced in the world.

NAIT Shell Manufacturing Centre: The NAIT Shell Manufacturing Centre is a one-of-a-kind facility in North America, the first in Canada to link productivity enhancement services with manufacturing solutions. Located near Edmonton's downtown core, the centre assists small- and medium-sized manufacturers with improving business processes by providing productivity solutions using innovative technology and manufacturing expertise. The centre specializes in research regarding prototyping, plan design, fabrication, control systems, and robotics and automation.

Port Alberta: Port Alberta, a joint venture between Edmonton Economic Development Corporation (EEDC) and Edmonton International Airport (EIA), fosters transportation and logistics linkages to simplify the supply chain and to promote economic diversity and value-added for Alberta. The organization seeks to improve the global reach of local businesses, advocates for policy, regulatory and infrastructure priorities, and facilitates innovative solutions that create competitive advantages for industry in the Greater Edmonton Area.