



WHERE PEOPLE & TECHNOLOGY PROSPER

**Oakland County
Michigan**
Emerging Sectors®

Medical Devices & Instrumentation



Extending Your Future

Oakland County Michigan Information

- ◆ Oakland County has 46% of Michigan R&D Facilities
- ◆ Michigan ranks second in the nation in total R&D Spending
- ◆ Michigan companies file over 3,000 patents a year placing Michigan in the top 10 states for total number of patents granted.
- ◆ Life Sciences in Michigan is a \$2 billion industry

Organizations To Support You:

- ◆ Automation Alley - Southeast Michigan's Regional Technology Cluster
- ◆ Beaumont's National Surgical Learning Center
- ◆ Core Technology Alliance
- ◆ Karmanos Cancer Institute
- ◆ Michigan Manufacturers Association
- ◆ Michigan Medical Device Association
- ◆ Michigan Research Institute
- ◆ Michigan's Technology Tri-Corridor
- ◆ MMTC - Michigan Manufacturing Technology Center
- ◆ MRI Institute for Biomedical Research
- ◆ National Center for Manufacturing Sciences (NCMS)
- ◆ National Institute of Industrial Technology (NAIT)
- ◆ Society of Manufacturing Engineers World Headquarters

Workforce: Educated, Innovative & Motivated

- ◆ Over 40% of Oakland County residents have college degrees (national average is about 26%)
- ◆ Oakland County has the third highest number of high-tech workers in the nation and twice the corporate R&D professionals compared to the national average
- ◆ Population of Michigan's workforce: 5.1 million
- ◆ 15 public universities, 60+ independent universities and colleges, 30 community colleges
- ◆ Over 124,000 college degrees were conferred in Michigan last year - this represents 4.3% of all degrees granted in the United States
 - ◆ 2 ½ times the number of master's degrees were granted in Michigan than the national average
 - ◆ Close to 1,500 Ph.D.s are granted in Michigan every year - almost twice the national average
- ◆ Michigan is third in the nation with the number of engineering degrees issued (last year 6,032 engineering degrees were granted)



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Michigan Universities: Research Centers

Central Michigan University

- ◆ The Brain Research & Integrative Neuroscience (BRAIN) Center

Eastern Michigan University

- ◆ Center for Product Research & Development Orthotics and Prosthetics Laboratory

Kettering University

- ◆ Biomechanics and Bioengineering Laboratory
- ◆ Orthopaedic Biomechanics Laboratory

Lawrence Technological University

- ◆ BioMedical Engineering Laboratory

Michigan State University

- ◆ Biomedical Engineering Enterprise

Oakland Community College

- ◆ Customized Medical Device Programs and Certificates

Oakland University

- ◆ Center for Biomedical Research
- ◆ Eye Research Institute

University of Michigan

- ◆ Orthopaedic Research Laboratories
- ◆ Human Motion Simulation Laboratory
- ◆ Center for Neural Communication Technologies

Wayne State University

- ◆ Bioengineering Center
- ◆ Research and Technology Center
- ◆ Brain Imaging Research Division

Western Michigan University

- ◆ Biological Imaging Center

Green - These universities are either located in or have campuses in Oakland County

Access to Capital

Oakland County's Economic Development Team will help your company find potential sources of capital and financing.

Michigan Venture Capital Association - Established by venture capital and private equity investors in the state, the Michigan Venture Capital Association (MVCA) is the state's premier public policy advocate for the private equity/venture capital industry. MVCA works to promote entrepreneurship and private equity investment.

Venture Capital - In four years alone, over \$694 million in venture capital has been invested in over 100 businesses in Michigan. For new emerging technology initiatives, the state has created the \$150 million Venture Michigan Fund to catalyze investment in early-stage firms operating here. With the matching requirement, this initiative will attract an additional \$450 million in capital to Michigan for investment in promising new companies.

Angel Networks - Aimed at helping companies with early stage seed financing, Michigan is fortunate to have three active Angel Networks: The Great Lakes Angels, The Grand Angels and The Ann Arbor Angels.

Traditional and Non - Traditional Financing - Oakland County's Business Finance Corporation and Economic Development Corporation help companies with the SBA 504 Loan and with Tax-Exempt Revenue Bond programs. Through the Automation Alley Technology Center, emerging companies can be assisted with securing non-traditional and unique sources of financing and capital.

State Incentives / Tax Credits - Michigan has a wide variety of incentive programs and tax credits for companies that qualify.



Courtesy Somanetics

Research Projects at Michigan Universities:

- ◆ Software development for designing DNA diagnostics
- ◆ Highly effective oocyte/embryo cryopreservation medium
- ◆ Implantable Device Technology
- ◆ New immunosensor techniques
- ◆ Molecular therapies
- ◆ Myocardial infarction repair methods and systems
- ◆ On-demand local drug delivery systems
- ◆ Biomedical sensors and instrumentation
- ◆ An integrated microfluidic device to sort motile sperm from non-motile sperm
- ◆ Implant bio telemetry
- ◆ Anterior spinal fixation devices
- ◆ Material properties of menisci, tendons and ligaments
- ◆ Implant structural materials, design and testing
- ◆ Bone stresses for hip fractures
- ◆ Biomechanics of musculoskeletal function and dysfunction
- ◆ Diagnosing articular joint pathologies via non-invasive, acoustical methods
- ◆ Trauma biomechanics
- ◆ Biosensors for biomedical applications, tissue engineering
- ◆ Mechanotransduction and osteoporosis
- ◆ Orthopaedic biomechanics
- ◆ Method to evaluate metabolism of the eye
- ◆ Flexible neural probes
- ◆ Prevention of cisplatin-induced deafness
- ◆ Anti-C5a for the treatment of sepsis
- ◆ Medication administration machine
- ◆ A biodegradable implant for intertransverse process fusion
- ◆ Design and fabrication of stents using planar metal foils
- ◆ Multi-function endoscope apparatus
- ◆ Method and assembly for performing ultrasound surgery using cavitation
- ◆ New highly-porous materials for tissue repair/engineering
- ◆ Compliant SMA micro-manipulators for an ultrasonic imaging system of intravascular intervention
- ◆ 3-D acoustic microscopy using short pulse laser excitation
- ◆ Femtosecond lasers for ultrafast optical science
- ◆ Robotic arms used for breast exams



Courtesy Beaumont Research Institute

Medical Devices & Instrumentation Companies

Accumed Systems
Advanced Sensor Technologies
Advanced X-Ray Technology
AI Medical
Alivio Corporation
A-L-S Technologies, Inc
American Dental Technologies, Inc
Americare Medical
Aspen Surgical Products
ATEK Medical Manufacturing
Autocam Corp.
AvaCore Technology
Axenic Dental
Axsys Technologies
Bayer Corporation
B C & F Tool Co. Inc.
Beaumont Research Institute
Beaumont Technology Usability Center
Becker Orthopedic Appliance
Beckman Coulter
Biomedical Diagnostics
Biophotonic Solutions
BioPro Inc.
Birchbrook Technologies
BPM Therapy
Bremer Prosthetics
Bristol-Meyers Squibb
CardiArc
Cardinal Health
Ceradyne Inc.
CFI Medical Solutions
Cielo MedSolutions
CJPS Enterprises
Conceivex
Covalent Medical
Critical Signal Technologies
Custom Biogenic Systems
Cybernet Medical Systems
DavisMade Inc.
DaVita Inc.
Delphi Medical Systems

Diamond General Development Corp.
Di-Coat Corp.
DOW Chemical Co.
Emerald Medical Devices
Entela Inc.
Farnell Equipment Co.
Garrison Dental Solutions
GE Materials
Great Lakes Diagnostics
G-WIZ
Henry/-Schein, Inc.
Homedics
Innovational Therapeutics
Interphase Implants
Intrepid World Communications
J&B Medical Supply Co, Inc.
Jabil Circuits
Johnson & Johnson
Kevin Odle and Associates
Koch's Orthotics and Prosthetics
L'VAD Technology
LaMed Inc.
Lumigen Inc.
Lynn Medical
MC3 Inc.
Mechanical Testing Services
Medical Accessories & Research Corp.
Med Image, Inc.
Medi-Nuclear Corp.
Medtronic
Michigan Diagnostics
Michigan Instruments Inc.
Michigan Surgical Equipment
Monal Labs Inc.
Motion Resources Inc.
MPI Research
MRI Institute
MultiGen Diagnostics
Neurogenic Technologies
Neural Intervention Technologies
NeuroNexus Technologies

Omega Surgical Instruments
Optim
Orchid Bio Coat, Inc.
Orthopedic Development
Osmic Inc.
Partners In Design Inc.
Philips
Pioneer Surgical Technology
Polega Prosthetics
Precision Edge Surgical Products
Progressive Dynamics Medical
Prosthetics Unlimited
PTI Engineered Plastics
RADAR Medical Systems
Regulatory Affairs Associates
Rigaku Innovative Technology
RJL Systems
Rockwell Medical Technologies
Selective Technologies
Signal Medical Corporation
SIMEK
Somanetics Corp.
Sonetics Ultrasound
Sparton Electronics
Stealth Medical Technologies
Stryker Corp.
Sun Medical
Surge Medical Solutions
Surgical Resources
Terumo Cardiovascular Systems Corp.
Thompson Surgical Instruments Inc.
Tk Holdings
Troy Biologicals Inc.
Troy Polymers
Twin Bay Medical
Vechtech
Vital Concepts
Wright & Filippis Inc.
Xoran Technologies

Green - Oakland County Companies

Blue - Southeast Michigan Companies

Black - Michigan Companies

Contact us with any additions or changes to this list.

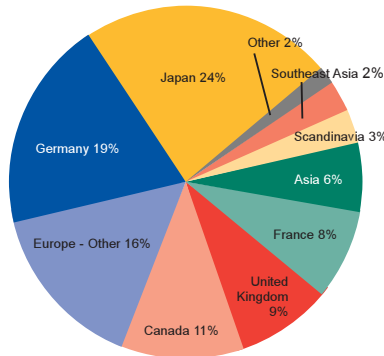
Oakland County Can Help Your Business

The Economic Development Team offers assistance in:

- ◆ Site location
- ◆ Financing
- ◆ Tax Incentives
- ◆ Liaison with state and local agencies
- ◆ Workforce development
- ◆ Business Assistance Center (business consulting)
- ◆ Information products - to ensure you make the right decision for your company's location

Oakland County is an International Hub

Foreign firms make the strategic decision to locate in Oakland County because of the highly skilled workforce, strong educational systems and the international support services available to them.



- ◆ More than 700 foreign-owned firms from 33 countries - with more than 900 business locations - are located in Oakland County
- ◆ For the past decade, the Oakland County Business Development Team has helped an average of nearly two foreign firms a month locate here
- ◆ Oakland County International Airport is one of the busiest corporate airports in the United States, with more than half a million passengers and pilots passing through each year



L. Brooks Patterson,
Oakland County Executive

*With the support of
The Oakland County Board
of Commissioners*

Oakland County is Strategically Located



- ◆ Centrally located between Chicago, Toronto and Cleveland, Oakland County is strategically positioned to capture the entire Midwest market
- ◆ The Michigan-Ontario border is the busiest U.S.-Canada crossing in the country, making this area an ideal location to reach the United States and the Canadian markets. Ontario, less than an hour's drive from Oakland County, generates some 40% of Canada's total gross domestic product



Contact us today for more information:

**Oakland County Department of Economic Development & Community Affairs
Planning & Economic Development Services**

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Oakland County's Medical Device & Instrumentation
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