

Washington  
Technology  
Center

Ideas. Connections. Jobs.



2001–2002 Annual Report

Created in 1983 by the state's legislature, the Washington Technology Center's purpose is to positively affect the creation and retention of jobs in Washington-based companies ... by increasing the effectiveness and ability of those companies to adopt and deploy technology ... that leverages the investment made in research at the state's universities.

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**IDEAS. CONNECTIONS. JOBS.**

That's how we have begun to think at Washington Technology Center. And it's paying off! FY2002 was very productive for the Washington Technology Center (WTC) and its partner companies—and all indicators point to a thriving future. I am proud to report that our impact in Washington reached a new high, generating almost \$23 to our partner companies and researchers for every dollar the state invested in WTC—over \$70 million in the last year. These new venture capital investments and major sales contracts are made possible in part by the work WTC sponsors with the state's universities.

In areas around Bellingham, Port Angeles, Seattle, Spokane, Wenatchee, and the Tri-Cities, WTC is supporting growing companies with research, technical assistance and facilities. These companies represent new job possibilities—for our citizens and for our children.

And we are transcending the technology portions of our economy. By using innovation and technology to enhance productivity in our existing, traditional industries, WTC has broadened the impact of technology on people's lives across the state.

That's why at WTC, we now think in terms of **IDEAS. CONNECTIONS. JOBS.**

Just a few noteworthy achievements:

- *Small Times*, a leading microsystems publication, recognized Washington and the Seattle region as one of the country's top microtechnology areas. WTC's investment in MEMS was identified as a major factor in this success.
- WTC won its first federal funding. The U.S. Small Business Administration is supporting a consortium of seven partners led by WTC to help Washington's companies win federal technology development projects funding.
- WTC's Microfabrication Laboratory passed \$600,000 in operating revenue. User fees covered nearly 90 percent of operating expenses, which indicates that the Lab is on track to financial self-sufficiency.
- Two companies "graduated" from the Microfabrication Laboratory into major new manufacturing facilities. These companies, located in Bothell and Vancouver, employ almost 200 people between them.
- WTC's impact on all regions of the state continues to grow. Fully 45 percent of the WTC partner companies are from outside the Puget Sound region, up from 38 percent last year.
- Our attention to reducing administrative costs is paying off. In FY2002 these costs dropped to 26 percent from 29 percent of total expenditures last year.

This report illustrates specific examples of our work for Washington State citizens. These successes are filling a need across the state and positioning WTC for even more impact in the future.

IDEAS. CONNECTIONS. JOBS. That's the WTC of the 21<sup>st</sup> century.

R. Lee Cheatham  
WTC Executive Director

## Industry and University Partnerships—Finding Solutions

- For assistance stabilizing its groundbreaking process for drying food, a company in Tacoma turns to Washington State University's College of Food Science.
- A company in Spokane needs help from Eastern Washington University to refine its rapid bacteria test, which can identify infected milk before it contaminates an entire shipment.
- To develop the next generation of biological array processors, a company in Mukilteo needs access to expensive systems and specialized equipment available at WTC's Microfabrication Lab.

Each example illustrates industry-university partnerships that WTC supported to advance a company's capability in the marketplace—leading to exports, new products, and the creation of jobs across Washington.

For almost 20 years, WTC has been the organization company researchers, business development teams, and entrepreneurs have come to for access to university researchers in Washington. WTC's marketing managers are familiar with world-class experts in the state and can help companies quickly reach the right researchers.

WTC has good news to report among its major programs and activities supporting statewide partnerships over the last year that includes:

- Awarding matching funds, as judged through peer review, to support particularly outstanding projects by university researchers collaborating with companies to develop new product innovations;
- Leading the WaFAST effort, a seven-member consortium that is helping companies in areas outside the Puget Sound win federal research and development funding to further their business development. Regions particularly targeted include the Tri-Cities, Spokane and Vancouver.

Companies reported that in FY2002, they raised \$44.44 million through sales, internal company investment, and outside investment associated with WTC projects. Forty-five percent of the companies that WTC helped were located outside the Puget Sound region, in some of the most economically distressed parts of the state.





## Collaborative Research Activities

WTC's largest single program activity is funding specific collaborative efforts between companies and university researchers. The ultimate goal of the program is to help Washington companies grow and to create local jobs. A total of thirty-four projects were active this year, with new awards accounting for six of those projects.

In FY2002, WTC funded projects in Advanced Materials and Manufacturing, representing a broad range of research with applications in avionics and diagnostic medical ultrasound equipment.

WTC also funded Biotechnology and Biomedical Devices projects, a diverse group that includes flax seeds and cancer prevention, augmented milk testing and pasteurization processes, artificial bone structure models, and diagnostic genetic tools for lymphoma.

Several projects in Computer Systems were ongoing, including voice recognition devices for aviation instrument control and a technology that uses fixed or mobile radio transceivers to provide telephone services.

Three Microelectronics projects continued during this reporting period, comprising such topics as wireless network monitoring devices and modeling the effects of integrated circuits on high-speed digital signals.

*Listed below are examples of some of the projects funded by WTC during the past year.*

### **HYPERION INNOVATIONS, INC., SEATTLE**

Every year, twenty million soldering irons are sold in the United States; most of these plug into an AC electrical outlet. Conventional soldering tools pass electricity through a heating element to generate heat that is conducted to the tip. This process is slow and inefficient, since only two percent of the generated heat is actually delivered to the solder.

Hyperion Innovations, a start-up company developing cordless heating tools and appliances, is designing a pocket-size soldering iron that promises to overcome these limitations with its proprietary Cold Heat™ technology. Hyperion's soldering iron omits the heating element and uses the solder itself to complete the electrical circuit, making the soldering iron compact and more efficient.

In traditional soldering irons, power output is controlled by the properties of the heating element and the iron. In Hyperion's iron, because electrical resistance changes as the tip gets hotter and the solder melts, power output is controlled by how easily electricity flows through the tip and the solder. As a result, heating is tailored to each job.

Working with Professors Wei Li and Ashley F. Emery of the University of Washington's Department of Mechanical Engineering, Hyperion is investigating the heating mechanism of its soldering iron and optimizing the size and shape of the tips in order to extend battery life. Hyperion is also testing a circuit that will regulate the power output of the soldering iron and make accurate output ratings possible.



*Image courtesy of Hyperion Innovations*



## INNOVATEK, INC., RICHLAND

In the future, cars, buses, and homes may be powered with clean, energy-efficient fuel cells, like the ones that power the space shuttle. Fuel cells generate electricity and function like batteries charged by the reaction between hydrogen and oxygen—non-polluting resources. Because pure hydrogen is difficult to store in a portable manner, one method of supplying hydrogen to fuel cells is to add on a device that will process natural gas or liquid fossil fuels into hydrogen using a catalytic process called “steam reforming.”

InnovaTek is a sustainable energy and environmental safety systems firm. The company is collaborating with Philip C. Malte, an expert in energy conversion systems at the University of Washington, to add a specialized fuel injector to its diesel-steam microchannel fuel cell processor. This technology can use the nation’s current fuel distribution infrastructure to provide a clean, quiet and energy-efficient electrical energy generating system.

The fuel injector, which is being developed and tested at the University’s Laboratory for Energy and Environmental Combustion, shoots finely atomized diesel fuel into a super-heated steam chamber, vaporizing and mixing the diesel fuel without significantly depositing carbon that can clog the fuel cell processor. The injector controls vaporization, making the diesel-steam mixture more uniform and less likely to stick or decompose on reactor walls.

The InnovaTek processor supports fuel cells that use commercially available fuels such as gasoline for portable devices, a tremendous advantage. Besides combining with fuel cells, InnovaTek’s fuel cell processor technology could also work on its own as a hydrogen generator for “gas” stations where drivers of fuel cell-powered cars can “fill ’er up.”



Image courtesy of InnovaTek

## MCFARLAND CASCADE, TACOMA

Composite lumber is made of a mixture of plastic and wood or plant fibers, formed into lumber shapes. This type of lumber is commonly used for outdoor deck building. However, current generation composites often sag and absorb water.

The wood products manufacturer McFarland Cascade has teamed with Michael P. Wolcott, a wood-plastic composites specialist from Washington State University’s Wood Materials and Engineering Laboratory, to develop a composite lumber product to replace natural or pressure-treated woods.

Mixing wood fibers with plastic is inherently challenging: some plastics melt at a temperature that causes wood to burn or degrade. The “ingredients” in a wood-plastic composite blend must therefore be carefully selected. The WSU-McFarland Cascade research team is identifying an optimal combination of polymers, resins, and fibers that interact well with each other, are easily processed, and will harden into a strong, lightweight, sag-resistant product.

If successful, this composite lumber could be strong and attractive enough to be used in many more outdoor applications than deck building, including fencing or outdoor furniture.



Image courtesy of Washington State University



### RS MEDICAL, INC., VANCOUVER

Every year, 250,000 Americans undergo lumbar spinal fusion for chronic back pain from herniated or degenerated discs, shock absorbers for the vertebrae. The surgery grafts bone between two or more vertebrae; the new bone grows and locks the vertebrae together, keeping the painful joint from moving. However, at least 30 percent of these surgeries do not successfully fuse, and complete recovery may take months.

Working with a team led by Steven A. Martinez, a small animal orthopedic surgeon at Washington State University, RS Medical is testing the ability of two of its electrical stimulators to enhance post-operative bone healing. These electrotherapy devices are currently manufactured for home use to relieve pain and restore muscle function. The goal is to provide proof of concept to the Food and Drug Administration, which regulates medical use of electrical stimulators.

RS Medical’s devices use interferential stimulation, which crosses two electrical waves of slightly different frequencies. The waves intersect below the skin, creating a low “beat” frequency equal to the difference in frequency of the two original waves. The higher amplitude of this beat frequency—about the sum of the two original amplitudes—penetrates tissue deeply and promotes bone growth.

The device can treat a larger area, making electrode placement easier. The simplicity of electrode placement and the therapeutic and pain-relieving benefits of these devices may enhance recovery for spinal fusion patients.



Image courtesy of RS Medical

### STRESSWAVE, INC., KENT

The vulnerable points of metal structures, such as airplanes, are at their rivet and fastener holes. Microscopic cracks originating at these holes can spread, weakening the material and causing the structure to fall apart under stress.

Cold working is a common technique to improve the fatigue life of fastener holes. In cold working, a tapered expansion mandrel is drawn through a small starter hole in the metal to enlarge it to the desired size and to strengthen it by compressing the surrounding metal. Since this method is difficult to automate, it is difficult to use.

StressWave has developed a process for improving the fatigue life of holes that eliminates the mandrel and other tooling, allowing automation for more materials and situations. Instead of strengthening a hole after it is made, the StressWave process treats the metal before it is drilled using the company’s patented “indentation” process. After the hole is drilled, the material surrounding the hole “bounces back,” improving its fatigue resistance.

Brian Flinn, a materials science and engineering professor at the University of Washington, is studying new applications for the StressWave process, including fatigue improvement in brittle materials, bending applications, and blind holes. Together the team will test and optimize the process for use in more aerospace, automotive, transportation or biomedical applications.

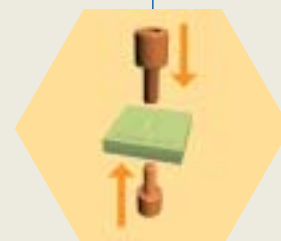


Image courtesy of StressWave

## The Washington Federal and State Technology Partnership Program (WaFAST)

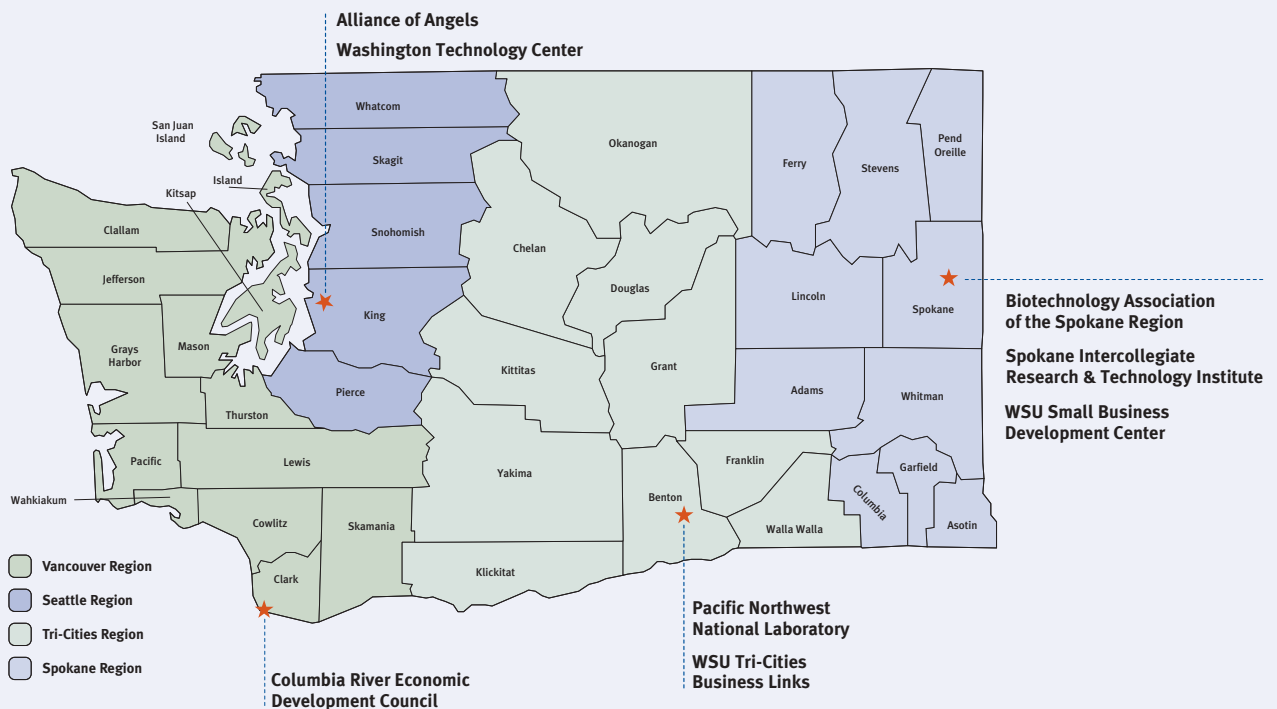
Regional alliances took a great leap forward this year. Led by WTC, the WaFAST consortium received a federal matching grant from the U.S. Small Business Administration Federal and State Technology (FAST) Partnership program. This new program supports businesses that employ fewer than 500 employees, and that are eligible for research and development money under the federal Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) programs. WaFAST is helping Washington companies access the nearly \$1.2 billion dollars available a year in federal funding.

Washington has traditionally been among the top 15 states that win awards, garnering \$23 million last year. However, 80 percent of those awards usually go to companies in the Puget Sound region. The WaFAST consortium works to increase the success of companies from outside the Puget Sound who apply for federal awards. Regions targeted under WaFAST include Spokane, the Tri-Cities, and Vancouver.

Initial results for WaFAST have proven successful. This year, WaFAST assisted over 250 companies throughout the state. Several companies won federal awards for the first time or were able to leverage their existing SBIR or STTR commitments into full business development efforts. Combined, this should result in more “equity-free” business development financing for new product development in companies across the state.

Support included proposal writing assistance, quarterly mentoring sessions, and a web site ([www.wafast.org](http://www.wafast.org)). In May, WaFAST sponsored a statewide conference in Spokane that drew 139 attendees seeking one-on-one counseling from federal agency representatives. WaFAST also presented workshops across the state that help SBIR/STTR-eligible companies raise money and reduce failures. This year’s workshops featured seed capital investors teaching companies how to put together a presentation to raise seed capital. In addition, a select number of companies were invited to meet with the WTC review committees to solicit comments and receive feedback on their basic business strategies.

### WaFAST Partners and Regions





## ACTIVE COMPANY PARTNERS

Advanced Silicon Materials, Moses Lake	La Haye Laboratories, Redmond
Amplicon Express, Pullman	LAB/COR, Seattle
ARI Technologies, Kent	McFarland Cascade, Tacoma
ATL Ultrasound, Bothell	Micronics, Redmond
Avista Utilities, Spokane	Molecular Kinetics, Inc., Pullman
Barlean's Organic Oils, Ferndale	Pacific Research Laboratories, Vashon
Bio~OriGyn LLC, Valleyford	RationalDiagnostics, LLC, Seattle
D&A Instruments, Port Townsend	Recycled Plastics Marketing, Redmond
dB Systems, Inc., Redmond	RS Medical, Inc., Vancouver
EKOS Corporation, Bothell	Sienna Technologies, Woodinville
Farrson Chemicals, Kennewick	Sonotech, Bellingham
GenPrime, Inc., Spokane	Spectra Lux, Kirkland
Hyperion Innovations, Seattle	Sterling International, Inc., Veradale
HyperLynx, Inc., Redmond	StressWave, Kent
InnovaTek, Inc., Richland	SuperTel Technologies, Inc, Redmond
Inova, Inc., Richland	UNIBEST International Corp, Pasco
Intelligent Ion, Inc., Seattle	

## UNIVERSITY RESEARCH DEPARTMENTS

### Columbia Basin College

Agriculture Program Operations

### Eastern Washington University

Biology

### University of Washington

Bioengineering

Chemistry

Civil and Environmental Engineering

Electrical Engineering

Engineered Biomaterials

Human Interface Technology Lab

Laboratory Medicine

Materials Science and Engineering

Mechanical Engineering

### Washington State University

Animal Sciences

Chemistry

Civil and Environmental Engineering

Electrical Engineering and Computer Science

Food Engineering

Health Research and Education Center

Institute of Biological Chemistry

Irrigated Agricultural Research Center

Mechanical and Materials Engineering

Physics

School of Molecular Sciences

Veterinary Clinical Sciences

Wood Materials and Engineering Laboratory



# PARTNERSHIPS

## Advisory Committee Members

WTC's advisory committees are comprised of talented and successful industry and faculty volunteers with technical and business expertise. They bring years of experience to the evaluation of proposals submitted to WTC for funding and are a key resource to WTC.

### ADVANCED MATERIALS & MANUFACTURING

**Lloyd Allen**  
Innovatek

**Greg Exarhos**  
Pacific Northwest National Laboratory

**Chuck C. Hammerberg**  
The Boeing Company

**Frank Hughes**  
The Boeing Company

**Daniel Kapral**  
Harris Group, Inc.

**Mike Landy**  
StressWave, Inc.

**Chris Rasmussen**  
Hewlett-Packard

**George Sutherland**  
Washington Manufacturing Services

### BIOTECHNOLOGY

**Andy Branca**  
UW Engineered Biomaterials (UWEB)  
University of Washington

**Wayne Gombotz**  
Amgen

**Doug Hansmann**  
EKOS Corp.

**Victoria Hunsicker Sanko**  
The Next Phase Consultancy, Inc.

**Don Lightfoot**  
Department of Biology  
Eastern Washington University

**Mike Lind**  
Battelle

**DeAnn Liska**  
Metagenics, Inc.

**Les Mace**

**A. Desmond O'Rourke**  
Professor Emeritus  
Department of Agricultural and  
Resource Economics  
Washington State University

**David M. Perozek**  
Therus Corp.

**Thomas Schulte**  
Micronics

**Russell Tucker**  
Veterinary Clinical Sciences  
Washington State University

**Ted Weiler**  
Olympic Medical

**Robert G. Widmaier**  
Widmaier Consulting

**Stan Wiley**  
SpaceLabs

### MICROELECTRONICS/COMPUTER SYSTEMS & SOFTWARE

**John Bennett**  
Thorson Pacific, Inc.

**Shira Lynn Broschat**  
Department of Electrical Engineering  
and Computer Science  
Washington State University

**Lloyd Burgess**  
Department of Chemistry  
University of Washington

**David Callahan**  
Cray, Inc.

**Sanjoy Chatterji**  
Entomo, Inc.

**Thomas R. Clary**  
The Inception Group

**Fred Cruger**  
Agilent Technologies

**Stephen Dame**  
dB Systems

**Fred Jaccard**  
Cypress Semiconductor

**Greg Kromholtz**  
The Boeing Company

**Gordon Kuenster**  
Seattle Sight Systems

**Kelvin Lynn**  
Center for Materials Research  
Washington State University

**Michael Ormes**  
click2learn.com

**Anil Sood**  
CRANE-Eldec Corp.

**Francis Spelman**  
Professor Emeritus  
Department of Bioengineering  
University of Washington

**Minas H. Tanielian**  
Boeing Space & Defense

**Alan E. Turner II**  
Battelle

### PHOTONICS SYSTEMS

**Bob Bernstein**  
Spectra Lux

**Paul E. Burrows**  
Pacific Northwest National Laboratories

**Jeff Griffin**  
Pacific Northwest National Laboratories

**Alex Jen**  
Department of Materials Science and  
Engineering  
University of Washington

**Wayne Kimura**  
STI Optronics

**Mark Kuzyk**  
Department of Physics  
Washington State University

**Dennis Lowenthal**  
Aculight

**Hillary MacDonald**  
TraceDetect, Inc.

**Steve Moody**  
Orca Photonic Systems



## Supporting the Technology Environment

WTC supports and promotes technology development in Washington State through a variety of means:

- Operating a Microfabrication Lab that is open to industry and academic users.
- Offering lab and office space to researchers.
- Identifying and funding new technology initiatives.
- Publishing information of interest to companies and researchers through a newsletter and web site.

## Microfabrication Laboratory

WTC's headquarters in Fluke Hall is also home to another of its resources: the 14,400 sq. ft. Microfabrication Laboratory, the largest lab of its kind in the Pacific Northwest. Set up to support MEMS (micro-electro-mechanical systems) fabrication, the lab is available to university faculty and their students as well as industrial users, all of whom have a common need to produce micron-scale structures in a cleanroom environment. Applications are as varied as the user base, ranging from micro-needles for neuron monitoring to micro-optic image display systems and fuel cells.

In addition to the specialized equipment for thin film deposition, etching and testing, the Microfab Lab provides an infrastructure of support facilities, such as ultra high-purity water, air purification and waste material neutralization that is required by the sensitive fabrication processes.

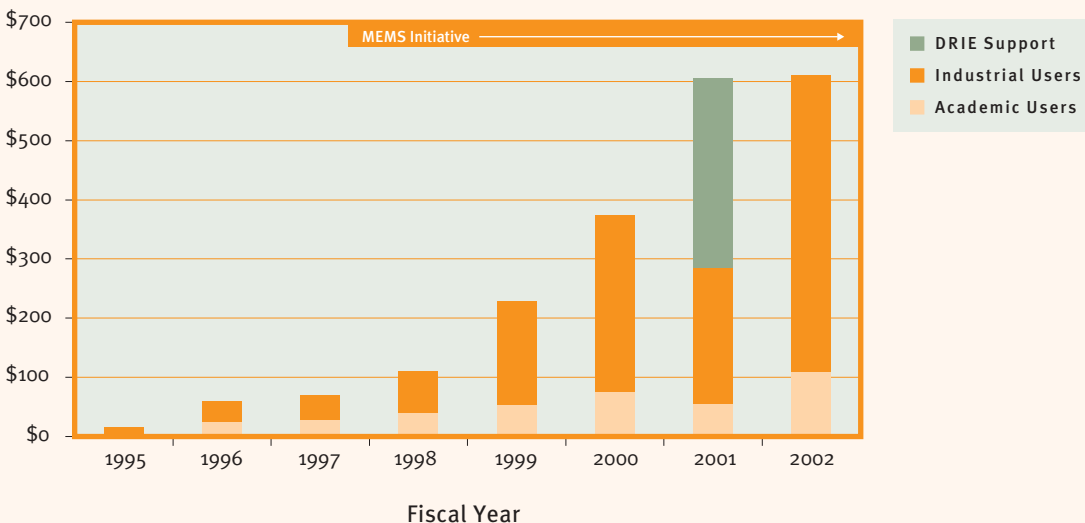
Staff additions in the past year have enhanced the Lab's technical depth, giving it the capability to fully support the training and process development needs of its user base. The staff of five engineers has years of experience among them in MEMS processing, semiconductor research and development, clean room maintenance, and chemical engineering. Particular attention has been given to new user training. The Lab's "Orientation and Safety Training" videotape, produced in conjunction with University of Washington TV Services, was a finalist in the past year's Telly Awards, which recognize excellence in non-broadcast video and film production.

FY2002 saw significant growth for the Microfab Lab in capabilities, users and revenue. Deep reactive ion etching, low-stress silicon nitride, and sophisticated profile measuring equipment were added to round out the Lab's process offerings. Plans are in place for continued expansion of the Lab. The user base has grown to 175, and, as shown in the graph below, the Lab has more than doubled its revenue from user fees, from \$285,300 the previous year to \$611,000. The Lab is quickly moving towards its goal of completely sustaining itself with user fees by the next fiscal year.



Image courtesy of Washington Technology Center

## Microfabrication Laboratory Growth





## Fluke Hall

WTC manages the occupancy of John M. Fluke, Sr., Hall, which houses 420 scientists and engineers working on a variety of research and development projects. This year, the Intelligent Systems Laboratory vacated its space when its director retired from the university. This space was re-allocated to the Knowledge Applications Laboratory (KAL), part of the University of Washington's Information School. This laboratory focuses on helping larger organizations develop the capability to "mine" their data across personnel and locations. Libraries, larger consulting firms, and financial firms are working with the KAL to develop specific products and services.

Besides WTC, other long-time occupants of Fluke Hall continue to be the Washington Center for Nanotechnology, the Human Interface Technology Laboratory, the University of Washington Genome Center, the University of Washington's Software and Copyright Ventures group, and several Human Genome research offices. Additionally, five professors conducting leading edge research in fluidics, drug diffusion, and electronics packaging maintain their residence in Fluke Hall.

## Emerging Technology Initiatives

WTC helps identify and foster leading edge technologies that can impact the future growth of our technology environment.

WTC's current technology emphasis is on photonics systems, a technology that harnesses the power of photons. WTC supported seven projects at universities and a fifth technology initiative conference in October 2001, "Wavelengths of the Future." Over 100 people attended from across the state. The keynote speaker was Philip Anthony, president of the Amplification Product Group for JDS Uniphase, a world-renowned leader in communications technology.

## Northwest Energy Technology Collaborative

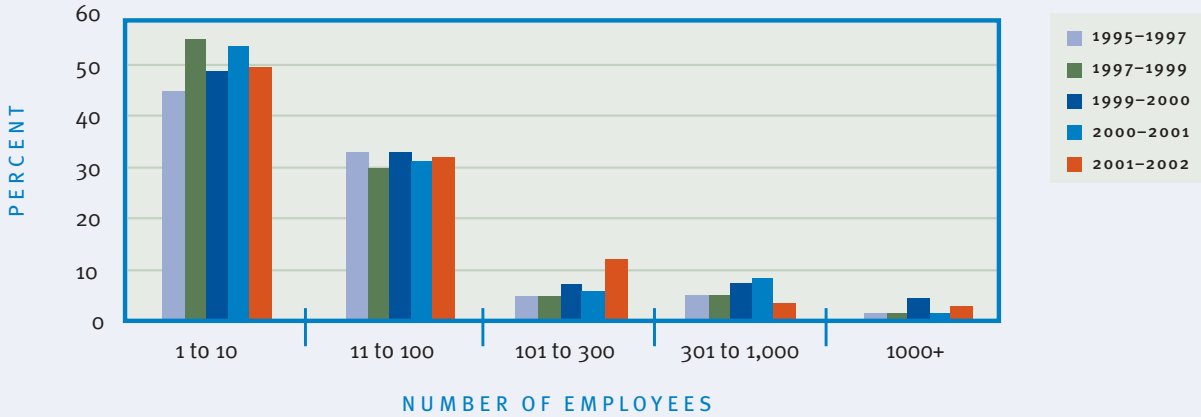
As the fiscal year ended, WTC was preparing to announce the formation of the Northwest Energy Technology Collaborative (NWETC). Under NWETC, WTC is leading a partnership with Avista Corporation, Bonneville Power Authority, Pacific Northwest National Laboratory, and the Spokane Intercollegiate Research & Technology Institute. The Collaborative members share the common goal to position the region as a recognized leader for innovative research, education and product development for energy technology markets around the world.

## Publications

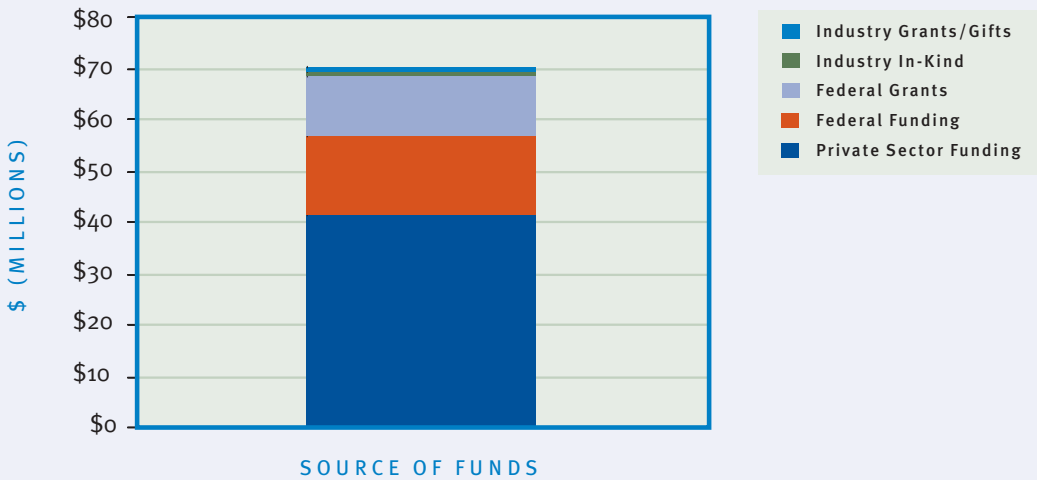
WTC's quarterly newsletter, *At-A-Glance*, provides coverage of leading edge companies in the state supported by WTC as success stories for others to model. The newsletter is also a major vehicle for publicizing conferences, events, and other activities of interest to technology businesses. Beginning with the June 2002 issue, *At-A-Glance* changed from a print publication to an electronic newsletter.



## Company Size



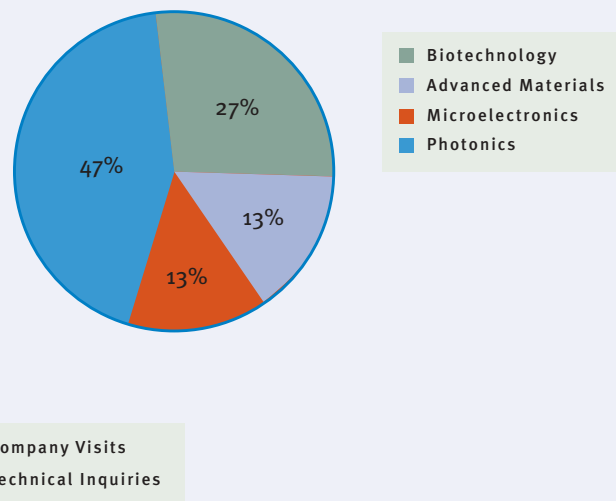
## WTC Leverages State Funds — FY2002



## Company Visitations & Technical Inquiries



## WTC-Affiliated Disclosures/Patents/Licenses



## WTC 2003–2008 Strategy — and Progress 2002

Over the last year, WTC completed work on its 1999–2003 strategic plan, and developed the next plan for 2003–08.

WTC's 1999–2003 strategic plan focused on three areas:

### 1) Ensure Statewide Participation

- WTC established regional offices in the Tri-Cities with Energy Northwest's Applied Process Engineering Laboratory and in Vancouver with the Columbia River Economic Development Council.
- This year, the number of WTC projects from outside the Puget Sound has increased from 37 percent to 45 percent.
- WTC spearheaded and secured federal funding for the WaFAST program, a consortium of six organizations that help companies around the state—particularly those outside the Puget Sound—win federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards.

### 2) Participate in the Technology Policy Discussion

- Eight regional focus groups were conducted to provide feedback on Governor Locke's strategy for supporting the innovation economy in Washington and to identify major local needs in technology-related economic development.
- The Northwest Energy Technology Collaborative—a group of business, government, nonprofit, industry, and educational institutions from across the state and region, was developed to accelerate the emergence and growth of the energy technology industry in the Pacific Northwest.

### 3) Increase Resources Available to WTC Programs

- WTC received its first federal funds (see 1. above), which were successfully leveraged by companies statewide via the WaFAST consortium.
- A funding request was submitted to the U.S. Department of Commerce Economic Development Administration to support the development of a statewide seed capital network, modeled after a similar plan in Oklahoma.

## Future Strategic Plans FY2003–08

In 2001–02, WTC's Board engaged in strategic planning, the result of which was a new 2003–08 strategic plan adopted in June 2002. The new plan includes the following elements:

### Goals — focused on providing the major operational objectives of WTC future activities:

- 1) Support technology-based economic development across the state.
- 2) Generate \$25 million in state, federal and private support for the first goal.
- 3) Become a pre-eminent organization recognized nationally.

### Strategies — specific tactical efforts that will be made during the next five years to accomplish WTC's goals:

- Develop a shared economic vision across the state.
- Improve our technology guidance system as it relates to future industry development.
- Expand to all regions of the state in partnership with federal, regional and local organizations.
- Create industries of distinction for the Pacific Northwest.
- Extend to include business services for assisting in technology transfer.
- Successfully manage the Microfabrication Lab for growth, and develop new critical facilities on behalf of leading industries.

The next five years should be very exciting as WTC continues to grow, and our impact on behalf of Washington State citizens accrues throughout a variety of industries and throughout much of the state.



# FINANCIAL REPORT



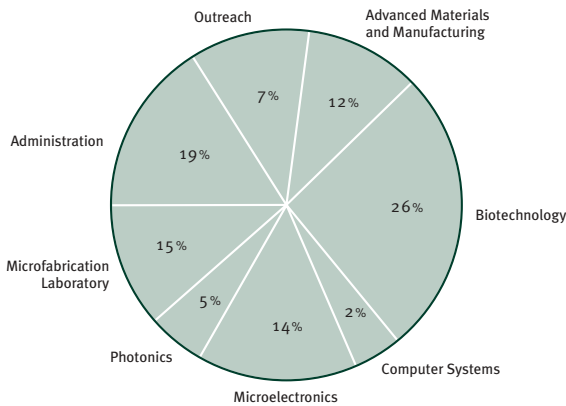
## 2001–2002 Annual Financial Report

### State Funds

July 1, 2001 through June 30, 2002

		Fiscal Year 2002	Fiscal Year 2001
<b>Appropriations</b>			
Operations		\$ 3,085,000	\$3,602,500
<b>Total</b>	<b>Appropriations</b>	<b>\$ 3,085,000</b>	<b>\$ 3,602,500</b>
<b>Expenditures</b>			
Operations		\$ 3,085,000	\$3,602,500
<b>Total</b>	<b>Expenditures</b>	<b>\$ 3,085,000</b>	<b>\$ 3,602,500</b>

Expenditures for FY 2002 not firm yet. This is an estimated figure.



### FY2002 Annual Expenditures by Program

Includes all WTC programs

	State Funding	Fees	Federal Funding	Totals
Advanced Materials & Manufacturing	\$440,495			\$440,495
Biotechnology	\$1,005,278			\$1,005,278
Computer Systems	\$70,426			\$70,426
Microelectronics	\$445,169			\$445,169
Photonics	\$175,297	\$10,500		\$185,797
Microfabrication Laboratory	\$80,329	\$611,623		\$691,952
Administration	\$694,575			\$694,575
Outreach	\$173,431		\$61,664	\$235,095
<b>Total Expenditures</b>	<b>\$3,085,000</b>	<b>\$622,123</b>	<b>\$61,664</b>	<b>\$3,768,787</b>

### Non-State Matching Funds

July 1, 2001 through June 30, 2002

		Fiscal Year 2002	Fiscal Year 2001
<b>C A S H</b>			
Federal Grants & Contracts		\$ 5,691,768	\$ 80,971
Industry Grants & Contracts		\$ 894,301	\$825,668
Industry Cash Gifts		–	\$ 210,174
<b>Subtotal</b>	<b>– cash</b>	<b>\$ 6,586,069</b>	<b>\$ 1,116,813</b>
<b>In-Kind</b>	<b>Gift</b>	<b>Commitments</b>	
		\$ 1,242,380	\$ 736,667
<b>Total</b>	<b>Non-State Support</b>	<b>\$ 7,828,449</b>	<b>\$ 1,853,480</b>
State Expenditures		\$3,085,000	\$ 3,602,500

Expenditures for FY 2002 not firm yet. This is an estimated figure.

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