



maui economic development board, inc.

**Strengthen. Diversify. Honor.**

### ***MISSION***

***To provide leadership and vision in our community for the responsible design and development of a strong, diversified and sustainable economy***

### ***VISION***

***A future in which abundant opportunities for rewarding employment are met by a qualified, resident workforce in Maui County, a community which honors its cultural heritage and natural environment***



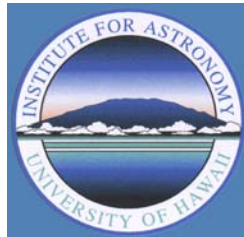
referentia



**TEXTRON** Systems



**hV**PHOTONICS



**Schafer**



**NORTHROP GRUMMAN**  
Information Technology



**TREX**  HAWAII, LLC







# Women In Technology Project

- Launched in 2000
- Mission: To engage girls/women and underrepresented groups in Hawaii in STEM education and careers
- Annual statewide reach: 6,500

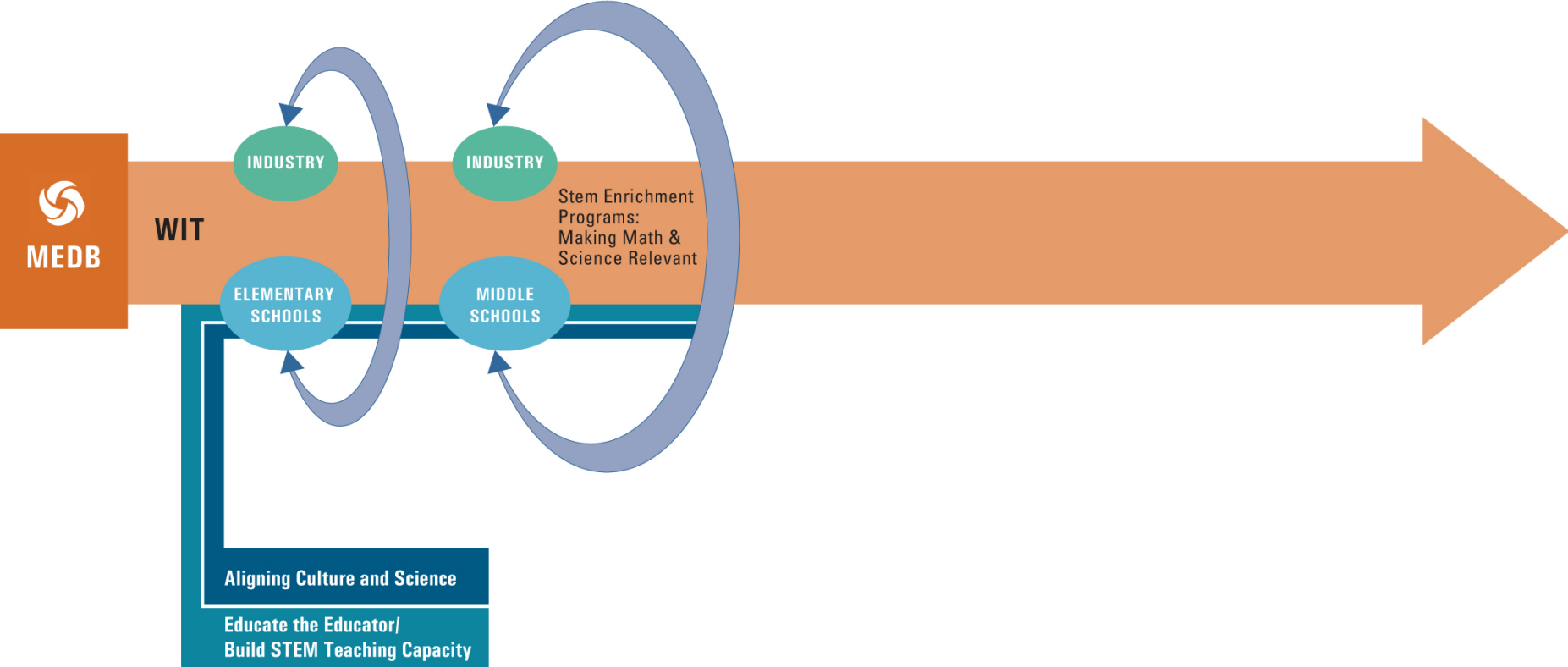
# BUILDING THE STEM PIPELINE

A Model for Inclusion



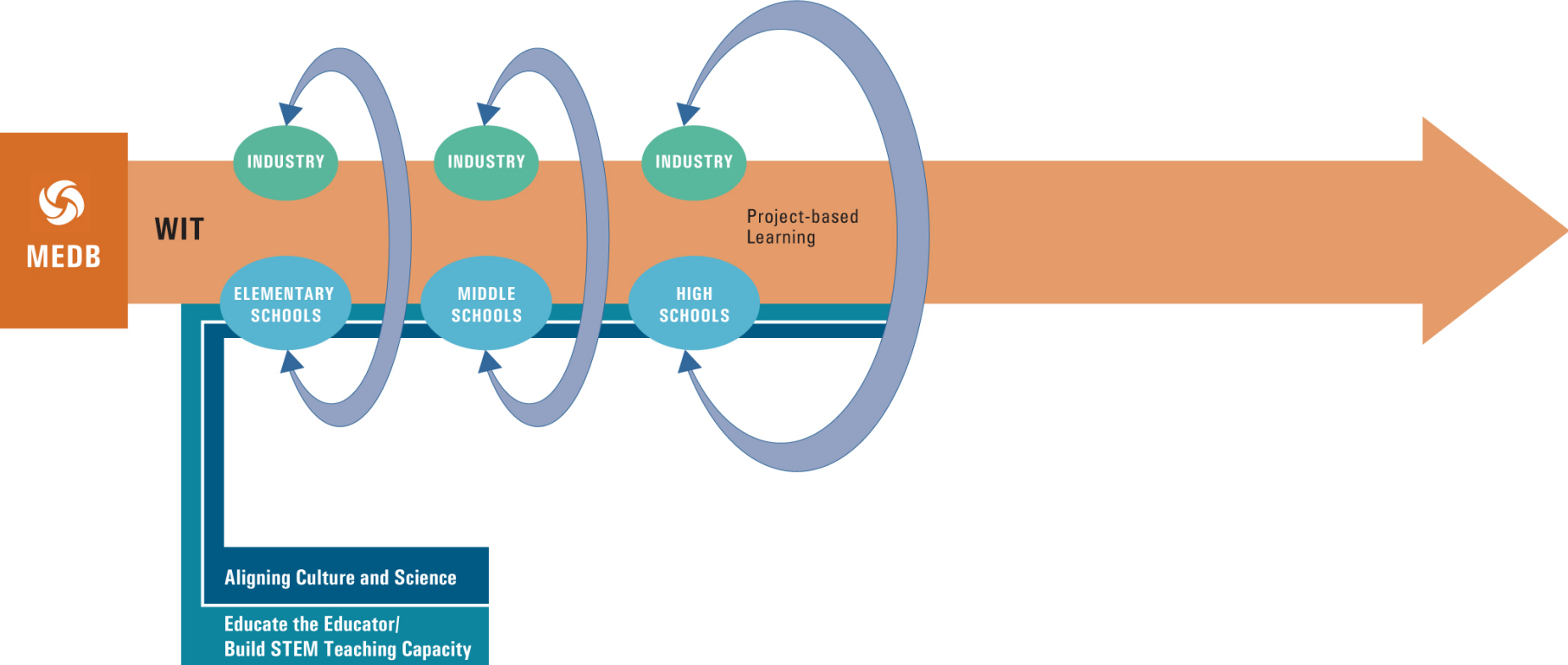
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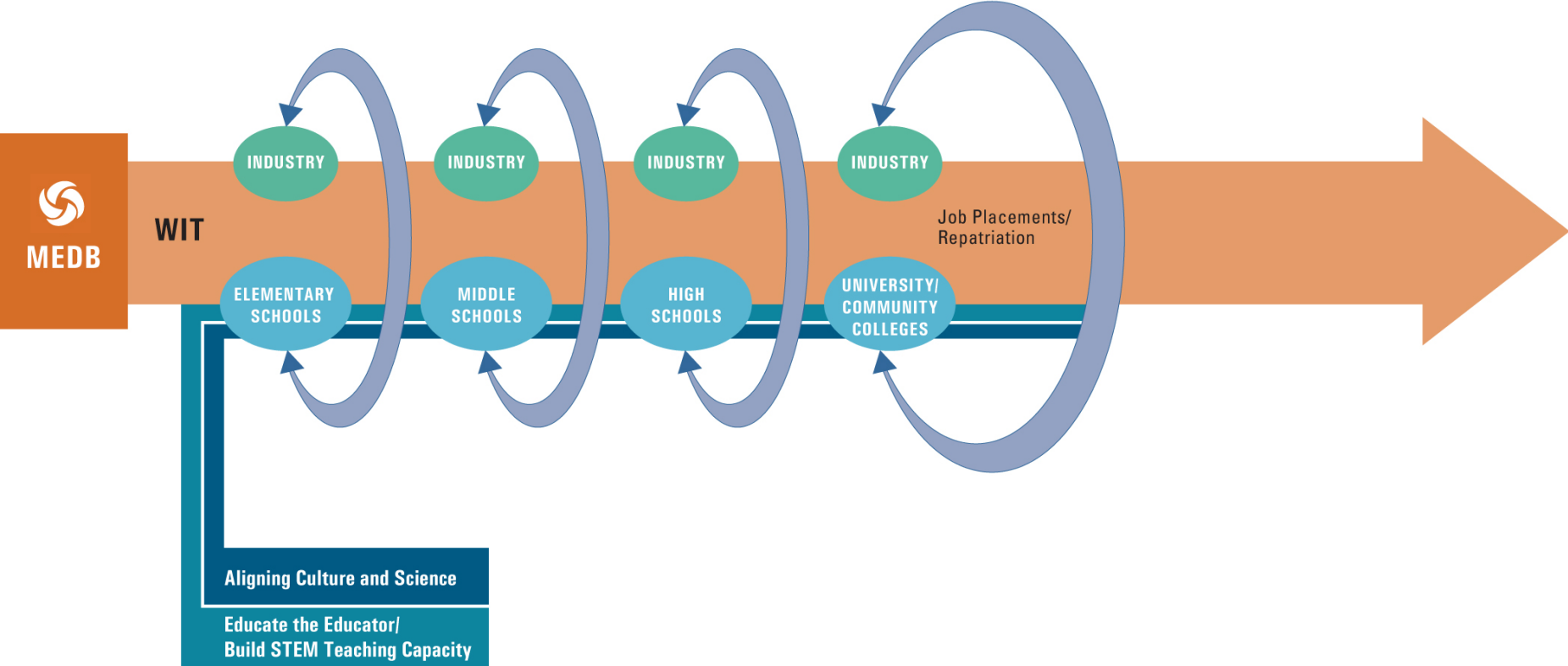
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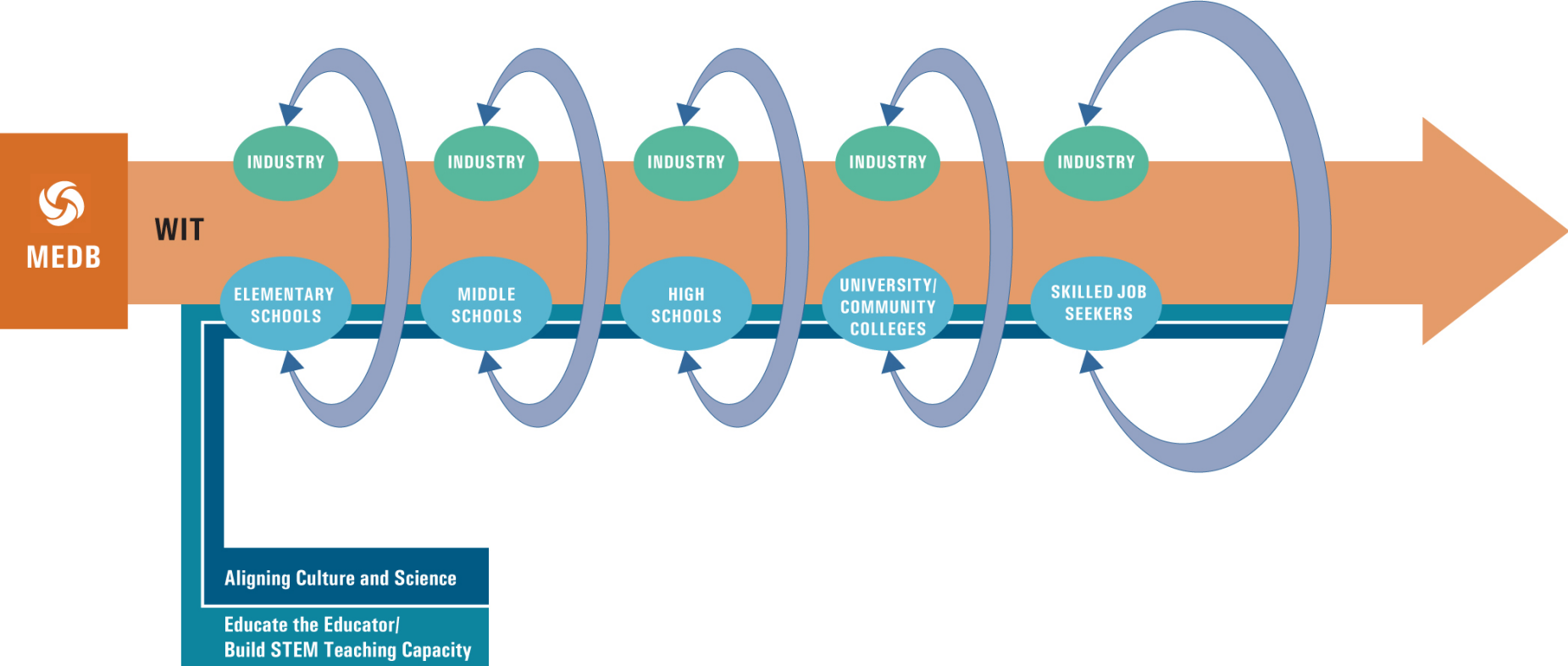
A Model for Inclusion





# BUILDING THE STEM PIPELINE

A Model for Inclusion





MEDB  
Ke Alahele  
Education Fund



## MEDB Ke Alahele Education Fund to date...

- Over \$450,000 raised
- Over 50 grant awards to educators, schools, youth groups
- 2,500 students reached

# Project EAST

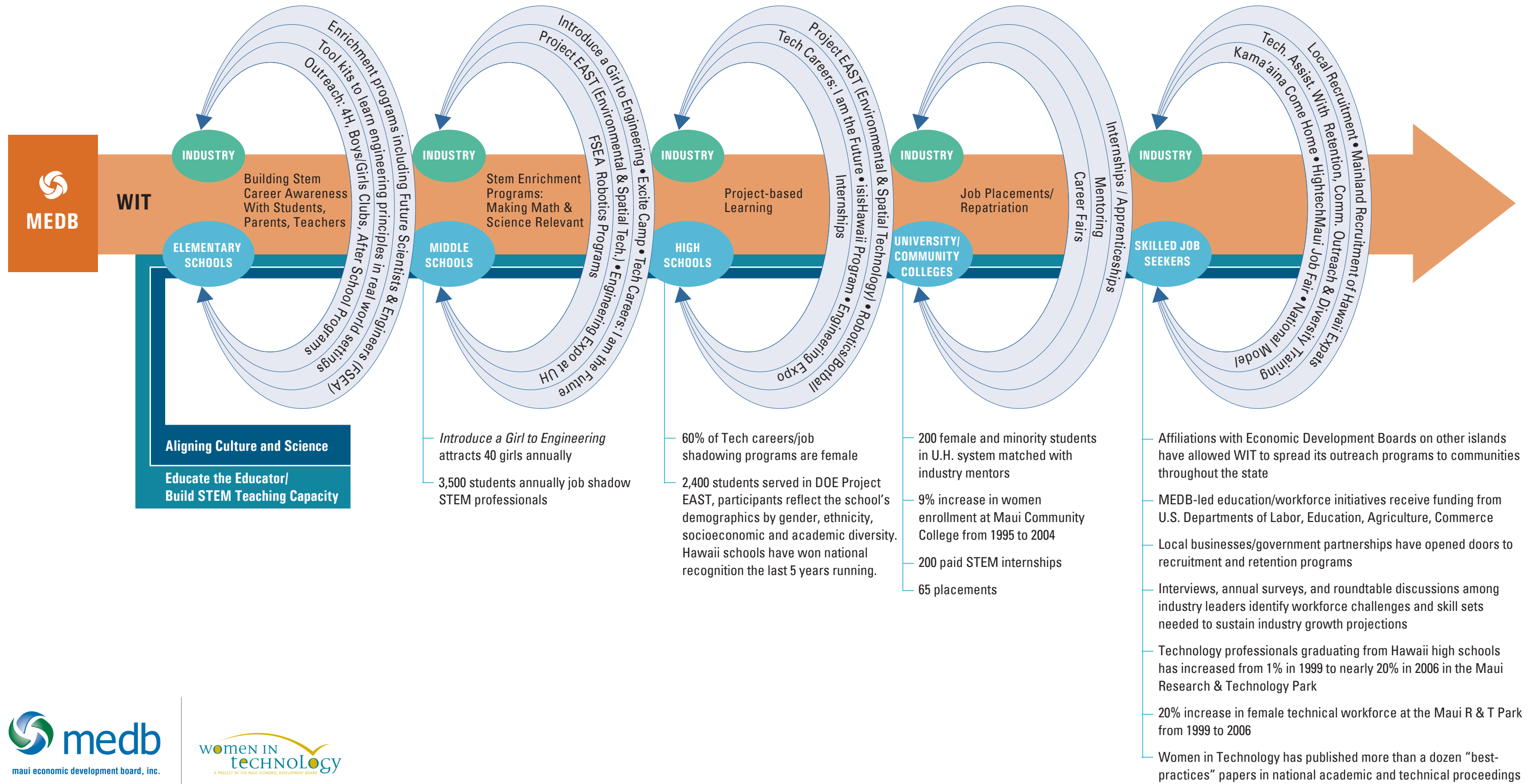
- Over 3,400 students served
- Student Tracking
  - Evaluations administered annually
  - Career Intent
    - **over 76%** showed increased interest in STEM due to Project EAST
    - **71%** plan to pursue a STEM related degree
- Self esteem increases significantly

- Private tech sector contributed \$106.4 million dollars to the Maui County economy.
- Between 2002 and 2007 tech sector employment grew 3.7% outpacing the 2.5% growth of the overall economy.
- 1,886 in high tech employment on Maui.
- 163 tech companies, approximately 3% of all establishments.
- \$69,000 average annual earnings per tech worker — 50% more than the average worker.
- Over 20% of tech workforce with Hawaii high school diplomas (up from 1% in 1999).



# BUILDING THE STEM PIPELINE

A Model for Inclusion



For more information, contact: [info@womenintech.com](mailto:info@womenintech.com)  
(808) 875-2300 [www.womenintech.com](http://www.womenintech.com)

# **MEDB Ke Alahele Education Fund**

## **Grant Guidelines**

### **Overview**

The Ke Alahele Education Fund was created by the Maui Economic Development Board, Inc. to help local educators, individuals, parent groups and other organizations enhance student learning as well as augment their own professional development. The Fund's goals are to:

- **Support needs, actions and efforts in the STEM areas (science, technology, engineering and math) that enhance education systems and activities**
- **Align education initiatives with Focus Maui Nui's vision, values and strategies**
- **Promote education experiences that meet or exceed the Hawai'i Content and Performance Standards set by the Hawai'i Department of Education**
- **Eliminate barriers to access tools that enrich educational opportunities in STEM**

We expect to make single-year awards up to \$5,000 to qualified applicants. We seek to fund the spectrum of K-12 activities and internships at the post-secondary level. Supported activities may include but are not limited to:

- **Internships for students or educators**
- **Culture--Science Integration**
- **Apprenticeships**
- **Innovative curriculum**
- **Professional development or training for educators**
- **Purchase of supplies or equipment to enhance science, technology, engineering and/or math (STEM) activity that will remain with the grantee after grant period expires**

### **Review Criteria**

The strongest proposals will be those that best meet all or most of the following criteria:

- **Proposed project is focused and well defined**
- **Project identifies clear outcomes and measures of success**
- **Project involves appropriate partners**
- **Project budget is concise, relates to the project description, and shows reasonable cost**
- **Project is innovative and will advance STEM education**
- **Project effectively integrates cultural content with scientific practices**
- **Project must involve an evaluation/way to measure results**
- **Project demonstrates excellence and impact in serving organization's constituency or our community**

- Applicant can be accountable for funds

## Eligibility

- Eligible applicants must be an educator, organization, school or student

## Grant Guidelines

- Proposals are for a one-year period
- Grantees may apply annually
- All grant proposals should allow up to 45 days for a response
- Applicants should ensure that there is adequate lead-time for processing grant applications including submittal and approval process, receipt of the grant money, and lead-time for long lead items (equipment, etc.)
- Grants are intended to supplement not supplant school academic programs (i.e., funds can be used to expand or enhance educational opportunities but not replace or compete with existing funds)
- Grant requests must involve an evaluation/way to measure results
- Educators are strongly encouraged to partner with the community to enhance project-based learning and provide 'real world' hands-on experiences. Grants that identify community partners will be given a higher priority
- All grant proposals will be reviewed by the MEDB Education Committee and awarded by the MEDB Board of Directors. Awards will be distributed in one lump sum

## Deadline

Application forms are available by calling 808-875-2300 or can be downloaded from the MEDB website at [www.medb.org](http://www.medb.org). We began accepting proposals on November 1, 2006, with an open deadline. Incomplete proposal packets will not be reviewed. Please send proposals to:

Maui Economic Development Board, Inc.

MEDB Ke Alahele Education Fund

1305 N. Holocono St., Suite 1

Kihei HI 96753

## Reporting Guidelines

A Final Report is required 30 days after grant period ends, and must contain details on how the awarded funds were spent, how many students/individuals were reached (if applicable), the grant, and the overall results of the awarded grant.

If you have any questions about these guidelines or the MEDB Ke Alahele Education Fund, please contact Leslie Wilkins at 808-875-2300.



**MEDB Ke Alahele Education Fund  
Program Grant Application**

**Date:**

**Name of School/Organization/Individual:**

**Address:**

**Project:**

**Title:**

**Phone:**

**Cell:**

**Email:**

**Amount Requested: \$**

**If you are applying as an individual student or educator, please provide a brief personal statement describing how this funding will advance your academic goals and/or professional development.**

**If you are applying on behalf of an organization, please describe the organization, its history, including an overview of its programs. Briefly describe the organization's place in its field, and in this community:**

**If your project has partners, please name them:**

**Describe the project and its activities (no more than 2 pages):**

**Describe the students/individuals to be supported by this grant (e.g. location, age and number of students/individuals, etc.):**

**What is the duration of the program/project?**

**Start date:**

**End date:**

**Describe the learning goals of the project (list at least two):**

**Describe how the project will enhance the student/individual/organization(s) awareness of viable STEM career and occupational opportunities:**

**Describe how the project will integrate culture, science and technology:**

**Describe the measurable outcomes (list at least two):**

**Provide a budget breakdown for the entire project using the attached budget form which will include the portion this grant would cover. If you think it would be helpful, provide explanation for items in your budget on a separate sheet. Please also indicate the source and amount of other support—whether in funding or in-kind—that you have received or expect to receive.**

**MEDB Ke Alahele Education Fund**

**Proposed Budget        \$**

**Grantee Name:**

**Project Title:**

**Date:**

<b>Expense Items</b>	<b>Unit</b>	<b>Subtotal</b>	<b>Request</b>
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
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	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
<b>EXPENSE TOTAL</b>	\$	\$	\$

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<b>Funding Sources</b>	<b>Subtotal</b>	<b>Pending</b>	<b>Secured</b>
MEDB Ke Alahele Education Fund Request			
Other Funds (Identify all sources and amounts below)	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
In-Kind Support (Identify all sources and types of support below)	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
<b>FUNDING TOTAL</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>

**Applicant Name:**

**Applicant Signature:** \_\_\_\_\_

**Date:**

**If organization:**

**Executive Director's Name:**

**Executive Director's Signature:** \_\_\_\_\_

**Date:**

**If applicant is an educator or student or if project is school-based, approval of principal is required and is indicated by signature below:**

**Principal's Name:**

**Principal's Signature:** \_\_\_\_\_

**Date:**

**Maui Economic Development Board, Inc.**  
**Native Hawaiian Participation in Education/Workforce Programs**

**2001 - 2006**

		2001		2002		2003		2004		2005		2006		TOTAL (*NH #s)	6 -Year Average %	TOTAL 6 Year Funding
		*NH	% of Total	*NH	% of Total	*NH	% of Total	*NH	% of Total	*NH	% of Total	*NH	% of Total			
Tech Careers	Job Shadowing - Middle & High School	25	42%	25	42%	40	67%	40	67%	35	58%	15	30%	180	51%	\$75,000
Excite Camp	STEM career awareness aligned w/ NH culture	25	83%	20	83%	20	83%	20	83%	20	83%	15	75%	120	82%	\$75,000
Mentoring MentorNet - college isisHawaii - high school start up pilot only	e-Mentoring, strategically matching mainland and/or Hawaii industry professionals with student proteges, serving women and underrepresented minorities in STEM fields			30	43%	31	35%	34	35%	34	38%	30	20%	159	34%	\$60,000 (isisHawaii startup \$50,000)
Project Environmental And Spatial Technology (EAST)	Project-based/service learning	110	28%	120	30%	132	33%	154	39%	171	43%	203	34%	890	34%	\$745,000
Apprenticeship	Computer Operator and Technical Trades	2	100%	25	45%	15	65%	31	67%	33	69%	8	89%	114	73%	\$130,000
Introduce a Girl to Engineering Day	Job Shadowing - Middle School	25	42%	25	42%	55	73%	45	50%	24	48%	12	40%	186	49%	\$25,000
CfAO Akamai Internship (college)	1 week accredited short course + 7 weeks field research (summer)					4	36%	4	36%	10	50%	9	33%	27	39%	\$110,000
Internships (college & high school)	Summer and school year terms					7	35%	12	30%	10	29%	15	42%	44	34%	\$150,000
Ke Alahaka Summer Bridge Program	Technology industry participation and career pathways					20	91%	25	93%	30	91%	n/a	n/a	75	91%	\$3,000
UH Engineering Expo (HS & Middle)	Engineering education exposure/recruitment			9	60%	31	52%	27	40%	40	36%			107	38%	\$26,750
Conference Support Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Society of Women Engineers (SWE) Air Force Maui Optical & Supercomputing Site (AMOS)	Scholarships for students to attend confernces for networking and career building					4	67%	6	50%	11	69%	23	46%	44	58%	\$37,000
Botball Robotics	Middle and HS, 4-H, Girl Scouts							5	42%	10	30%		0%	15	24%	\$50,000
Archimedes Project	Hands-on engineering workshops							10	5%					10	2%	\$18,000
Future Scientists & Engineers of America	Turn-Key lab modules, curriculum aligned grades 4-12	1	4%	40	19%	36	18%	42	23%	30	25%	50	31%	199	20%	\$75,000
GEAR UP (same cohort)	STEM enrichment for under served populations					20	13%	20	13%	20	13%			60	10%	leveraged other federal funding
4-H Tech Connect	Career awareness, GPS/GIS training, Robotics											8	27%	8	27%	
Physics Fun Day / GIS Day / National Pi Day / Middle School Science Fair	Math and Career Relevance Activities									15	38%	24	73%	39	55%	\$3,500
<b>AVERAGE</b>		<b>188</b>	<b>50%</b>	<b>294</b>	<b>46%</b>	<b>415</b>	<b>51%</b>	<b>475</b>	<b>45%</b>	<b>493</b>	<b>45%</b>	<b>412</b>	<b>32%</b>	<b>2277</b>	<b>42%</b>	

\*NH - Native Hawaiian Participants



Annual Report on Operations  
July 1, 2007 - June 30, 2008



STRENGTHEN  
DIVERSIFY  
HONOR



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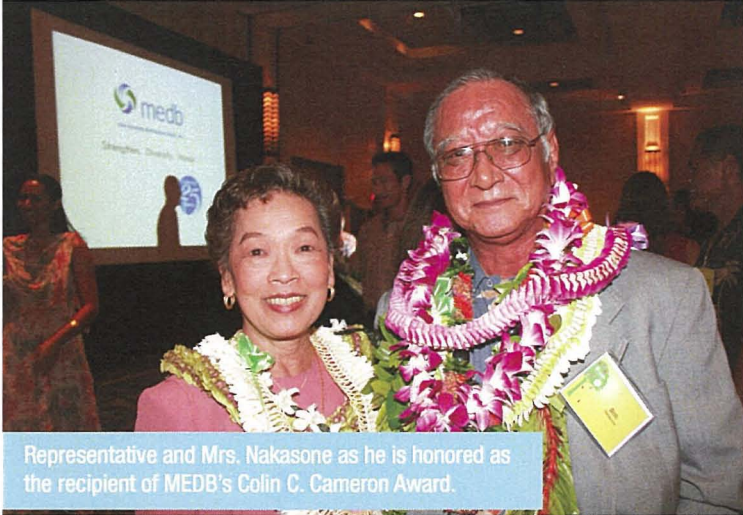
Middle school girls job shadow engineers from Goodfellow Brothers during annual "Introduce Girls to Engineering Day."

## VISION

A future in which abundant opportunities for rewarding employment are met by a qualified, resident workforce in Maui County, a community which honors its cultural heritage and natural environment

## MISSION

To provide leadership and vision in our community for the responsible design and development of a strong, sustainable, and diversified economy for Maui County



Representative and Mrs. Nakasone as he is honored as the recipient of MEDB's Colin C. Cameron Award.



Alexander & Baldwin's Grant Chun, Stan Kuriyama and Steve Holaday celebrate MEDB's 25th Anniversary by presenting President & CEO Jeanne Skog with an A+ Report Card and a Signature Sponsorship of \$25,000.



Sen. Daniel K. Inouye and Mayor Charmaine Tavares share a moment with Rep. Bob Nakasone at "A Pathway To Our Future," the 2007 event benefiting MEDB's Ke Alahele Education Fund.



## EXECUTIVE SUMMARY

### Aloha!

2007 marked our 25th year. Amidst the usual frenetic energy of students, entrepreneurs and partners, it was a time for reflection, appreciation and celebration.

Clearly, MEDB has changed. In 1982, there were just two staffers, Don Malcolm and me, guided by a 12-member board of directors and armed with a vision that would benefit an entire community. Our budget was about \$50,000 that initial year. Today, our staff has grown to 24, including two on Oahu, delivering on a myriad of programs that seek to transform lives and businesses around a diversified economy. Our budget is about \$4 million a year. Women in Technology alone reaches 5,000 residents a year.

But in the most fundamental way, we have stayed the course. We remain focused on broadening career options for our residents. We seek and assist businesses in targeted sectors which include astronomy, optics, information systems, agritechology and renewable energy. With education and industry partners, we shape education and training offerings that enable—and empower—our residents to participate in this economy.

Our founders set the culture of innovation, of creating solutions to solve unprecedented challenges. Donald Malcolm, our first president, set this pattern. For him, research—gathering adequate information—laid the foundation for building effective solutions. This year, Don posthumously gifted MEDB with funds to realize its goal of conducting “research and analysis on economic issues that promote informed decision making.” Don’s dedication to MEDB was unprecedented—and it lives on.

Don’s generosity reminded us of just how fortunate we are to have been a part of a legacy of giving throughout MEDB’s 25 year history. Memberships, sponsorships, volunteering, and grants combine to give us fiscal stability and perform.

The addition of the MEDB Ke Alahele Education Fund was more cause for celebration. Over \$210,000 was raised in our first major fund raiser, headlined by our Distinguished Educators U.S. Senator Daniel Inouye and Mayor Charmaine Tavares. That giving by our community to science and tech education inspired us all. The over 30 awards to date translates to a reach of 1,500 students.

We are pleased to share our 2007-2008 year with you. It is not intended to be comprehensive but rather representative of our programs and initiatives and their outcomes. It is also an invitation to continue or to begin to work with us as we rise to meet new challenges and explore more opportunities on behalf of Maui Nui.

A Hui Hou,

Jeanne Unemori Skog  
President & CEO



Youth Alliance members visit Maui Memorial Medical Center and Akaku: Maui Community Television

“Focus Maui Nui has begun to influence many aspects of life on our islands...from major employers to small community-based organizations to candidates for public office...”

— 2008 Stepping Forward tabloid

## PROGRAM GOAL

Build **community consensus** for economic development priorities in Maui County, guided by the vision and values of Focus Maui Nui.

### BUILDING CIVIC ENGAGEMENT

#### Focus Maui Nui

##### Youth Alliance (YA) connects to community

Youth Alliance seeks to create stewards of Maui Nui's values and priorities by exposing young people to systems in our community within the context of Focus Maui Nui.

- This year, 30 teen members participated in eight hands-on sessions that emphasized Science and Technology as a tool in civic engagement, agriculture, health care, astronomy, public safety, culture, hotel operations.
- 2007-08 YA hosts included: AKAKU, Monsanto, MEDB, Maui Memorial Medical Center, Maui Community College/Culinary Arts Academy, Institute for Astronomy/Air Force Research Laboratory, Pacific Disaster Center, and the Lanai community.
- Youth Alliance members also provided a youth perspective at the "Maui Water Resources Forum" presented by the Sustainable Living Institute of Maui. The two-day conference offered information about the current state of water on Maui including its impact, challenges and options.

*"Today was really fun because we actually got to make a show and get involved in what AKAKU does..."*

— Kiana Atkinson, 3rd year YA member

#### FMN column continues to grow awareness



- The weekly Focus Maui Nui newspaper column continued in The Maui News.
- The exposure and new format in the newspaper and ads in the Maui Weekly, Lahaina News and Haleakala Times have allowed the strategies of FMN to grow in awareness and draw new readers.
- Case in point: FMN project manager Alexa Betts Basinger wrote a column on the Hibiscus that triggered numerous responses. Many readers called, wanting to know how to help propagate the plant and several even went to the Maui Nui Botanical Garden with the article to ask about getting a plant to propagate.



Youth Alliance members visit Faulkes Telescope

#### **Young Leadership program launched**

- After two years in the planning, Ka Ipu Kukui Leadership Program was launched in September 2007. The dozen young leaders who were accepted into the first year of the program came from a variety of businesses, community organizations and education.
- A partnership between Focus Maui Nui and Decisions Maui Leadership program has incorporated the vision and values of both programs as it strives to provide valuable input for the County's General Plan.

#### **FMN surveys residents at the County Fair**

- Thanks to the assistance of the Maui Farm Bureau, Focus Maui Nui again had a robust presence at the County Fair.
- With the help of community volunteers and MEDB staff, nearly 1,100 resident surveys were collected, serving both as a measurement of FMN's evolving efforts and an awareness tool to involve more residents.

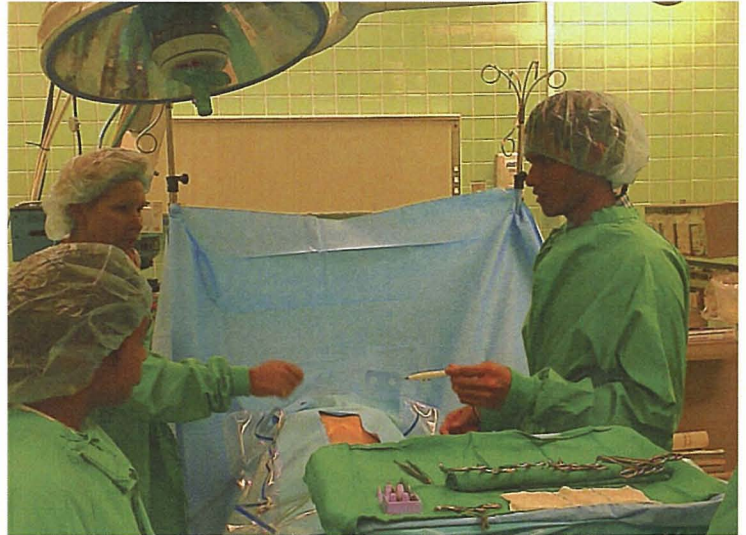
#### **Maui County Energy Expo 2007**

Over the past three years, MEDB has become more involved in clean technology products and has identified the Energy sector as one of the most locally viable in its economic development efforts.

- Building on this work, MEDB was pleased to partner with the County of Maui to present the two-day Energy Expo. The event brought together businesses, government, community development organizations and the public in advancing the development of green future for Maui County.
- Following the theme "Green Power, Green Future", the inaugural event attracted 300 participants.
- Five working groups were formed to discuss renewable energy options and formulate recommendations for a comprehensive Energy Action Plan for Maui County that will make it a vibrant community model powered by sustainable energy solutions.



- Project EAST was also invited to participate in the educational panel. Students highlighted their EAST projects related to green energy. In addition, two students were asked to speak at the conference closing remarks.
- From the vision developed at the Energy Expo came the formation of the Maui Energy Alliance, a partnership with Maui Economic Development Board, Maui Community College, and the U.S. Department of Energy. For more on the Energy Alliance, see Goal Two.



Focus Maui Nui Youth Alliance visit Monsanto



Solar array on MEDB's Ke Alahele Center

## Sun delivers juice to MEDB

In early 2008, the Maui Economic Development Board unveiled its new solar energy system, the largest photovoltaic solar array ever built on Maui.

The project was the result of a third-party financing deal with California-based Solar Power Partners, which agreed to pay more than \$500,000 for installation and maintenance, then sell the power back to MEDB for less than current Maui Electric Co. rates. MEDB Executive Director Jeanne Skog said the deal showed how creative financing could make renewable energy possible for local businesses.

The solar array, which can generate an estimated daily output of 175 kilowatts per hour, was installed atop MEDB's building in the Maui Research Technology Park. It powers all of MEDB's offices, as well as common areas in the building. On sunny days, surplus power will be sold to Maui Electric, while MEDB will buy back power when it's cloudy.

Source: Maui News

## PROGRAM GOAL

Inspire, support and promote **innovation** in economic development throughout Maui County

### DEVELOPING BUSINESS

#### **Tech Enterprise 2007**

*June 20-21, 2007 Honolulu, Hawaii*

The conference seeks to introduce Hawaii companies to resources that foster economic growth and promote technology development in the islands.

- Together with the Kauai Economic Development Board, University of Hawaii, Hawaii Technology Development Venture (HTDV), MEDB joined a panel to talk about the supporting activities of organizations who assist tech companies.
- The event is targeted toward "dual use" companies throughout the state who develop technologies that have both military and commercial applications.

#### **2007 Society for Optical Engineering (SPIE) Conference**

*August 28-31, 2007 San Diego, California*

MEDB was part of the Team Hawaii event to showcase Hawaii's space, astronomy and National Air Defense assets, as well as to network to attract potential businesses to Maui County.

- Approximately 5000 attended and gave Team Hawaii an excellent opportunity to recruit kama'aina living in the mainland who were interested in coming home to work.
- Conference featured 280 exhibitors focused on Optical Engineering and Instrumentation, Nanophotonics, Organic Materials, Illumination Engineering and Solar and Alternative Energy.
- Team Hawaii occupied a large pavilion anchored by the University of Hawaii, Enterprise Hawaii, Department of Business, Economic Development and Tourism (DBEDT), as well as local Economic Development Boards and private industries.
- MEDB distributed over 350 copies of Maui County brochures featuring Maui business assets and made over 200 contacts. These contacts are crucial to Maui's success in expanding our tech industry.
- Next year, Team Hawaii is considering a switch to the Photonic West conference whose 17,000 attendance ensures Hawaii a larger stage to showcase its technology assets.

## 2007 AMOS Conference

September 12-15, 2007 Wailea, Hawaii

- Over 550 scientists, engineers and technical managers from academia, industry, government and the military attended the keynote speeches and poster sessions.
- As a shining example of MEDB's ongoing mission to diversify Maui's economy through technology, the AMOS conference attracted attendees from nine countries and has become the nation's top space situational awareness (SSA) conference.
- Over 90 technical papers were presented in sessions and another 25 in poster format. Topics included telescopes and sensors, imaging, adaptive optics, space object identification and PAN-STARRS.
- AMOS also attracted 12 conference exhibitors, representing an outstanding cross-section of space-related technology companies, suppliers and services.
- A first for the conference: A total of seven sponsors including title sponsors -- Boeing Company and the County of Maui. Featured conference sponsors included Analytical Graphics Inc., Lockheed Martin, Pacific Disaster Center, and SAIC.
- MEDB surpassed its projections garnering \$50,000 in sponsorships and \$18,000 in exhibitor revenue.

*"AMOS is a great forum to understand the challenges the government is facing and how industry can support them."*

— Steven Caponos  
Retired USAF, now SAIC executive



Technical poster presentation at AMOS Conference

**2008 Power-Gen Renewable Energy and Fuels Conference**

*February 19-21, 2007 Las Vegas, Nevada*

In its fifth year, this premier all-renewable conference and exhibition features the most important trends and issues impacting the industry. The event brings together wind, solar, biomass and alternative fuels, hydro and geothermal sectors for three days of strategic information exchange, regulatory and economic issues and networking.

- Over 170 exhibitors from across the U.S. and Europe, Canada and China were represented
- Prior to leaving the island, MEDB met with eight Maui companies to present their collateral materials and generate marketing leads.
- The timing of the Team Hawaii exhibition was perfect because it coincided with the DOE/Hawaii State MOU which was just signed and announced nationally, prompting high traffic at the booths and generating 200-250 quality contacts.



Exhibit at National Space Symposium

**24th National Space Symposium**

*April 7-10, 2008 Colorado Springs, Colorado*

The National Space Symposium remains an important annual venue for promoting the AMOS Conference and Hawaii's space-based assets among 7000+ international participants.

- MEDB exhibited jointly with AFRL and DBEDT's Office of Aerospace Development under the banner "Aerospace in Hawaii: A Constellation of Opportunities".
- The Team Hawaii booth with its Hawaiian music, flowers and shell lei became the undeniable center of attention prompting Space Foundation President & CEO Elliot Pulham to comment, "Hawaii...small booth, big presence!"
- AMOS/MEDB staffers were able to confirm major sponsor commitments from Raytheon and AGI while setting up key exhibitor prospects. AMOS giveaways also attracted 200 business cards representing targeted contacts.



MEDB showcases Maui's diversified agriculture and biofuel industry at 2008 Bio International

**2008 BIO International Conference**

*June 16-19, 2008 San Diego, California*

WIT Project Manager Jenilynne Salvador Gaskin and MEDB's High Tech Maui Program Director, Steve Perkins, joined colleagues from DBEDT and EDB at the Team Hawaii exhibitor booth to promote business development for Hawaii-based biotech companies, as well as provide contacts and information for kama'aina who may want to come home to work.

- The conference and exhibition attracts over 20,000 attendees annually from 61 countries and all 50 states.
- MEDB generated over 100 contacts for bio-energy, bio-ag, bio-med and agri-tech companies represented at the exhibition.

## ASSISTING BUSINESS

Through its High Tech Maui program, MEDB assisted over 50 businesses that were interested in setting up or expanding in Maui County this year. They spanned a wide range of industry sectors including Agriculture, Beverage Industry, Dual Use, Federal Projects, Financial, Food, Medical Research, Renewable Energy, Space industries among others.

### Maui Food Technology Center (MFTC) opens

- Aligning with Focus Maui Nui strategies to develop a self-sufficient, sustainable future for Maui County, the new Maui Food Technology Center represents the tremendous potential of diversified agriculture and the natural resourcefulness of our island residents to create products from locally grown crops and food.
- A key goal of MFTC is to be Hawaii's premier resource for food science and food technology education that attracts, grows and supports the next generation of Hawaii farmers and agri-businesses.
- MFTC will educate and train MCC students in food technology principles and practices, in addition to providing information and outreach services to farmers, food producers and the public.

### High Technology Development Venture (HTDV) becomes new partner

- As part of its focus to diversify and strengthen the local technology sector, MEDB has partnered with HTDV to build capacity among Hawaii-based small businesses to perform high technology work related to Department of Navy and Department of Defense programs.
- HTDV is striving to create a Pacific regional center for commercialization of defense and homeland security technologies that would benefit small companies in Hawaii.
- The result will be a stronger technology base in Hawaii to meet technology opportunities and enhance our economy statewide.

### Maui County Energy Alliance launched

- Led by Mayor Charmaine Tavares, MEDB joined the County of Maui, Maui Community College and the Department of Energy to work toward a vision of a green energy future for Maui County.
- Five working groups that include local experts and citizens are focused on renewable energy, green work force development and education, energy and transportation infrastructure, energy efficiency and conservation, and the reduction of greenhouse gases and carbon emissions.
- The goal is to achieve 95% renewable energy and a neutral carbon footprint for the county by 2020.

### Department of Energy reviews Maui's renewable energy efforts

Bill Parks from the federal Department of Energy brought eight other officials from Washington D.C. to get acquainted with MEDB on renewable energy activities

- In subsequent sessions, the energy officials also met with other Maui companies that were advancing renewable energy including Hnu Photonics, RENEWW (wood to energy company), Maui Energy Group (electric cars) and Provision (photovoltaics).
- DOE's assessment continues to be that Maui County is well positioned to accelerate renewable energy for short- and mid- term and the DOE is committed to assist.
- In February 2008, the State of Hawaii and signed a Memorandum of Understanding (MOU) committing to a partnership to work towards "dramatically shifting Hawaii's energy system from one that is fueled primarily by oil to one that is powered primarily by renewable energy."

### Maui Film Festival continues strong showing

- MEDB continued on its multi-year contract with the Hawaii Tourism Authority (HTA) to support the Maui Film Festival in Wailea. HTA has been very impressed with founder and director Barry River's ability to draw A-list celebrities, as well as generate high caliber editorial and publicity partners nationwide.
- MEDB is the fiscal sponsor of the state and county funding for the Film Festival that continues to bring in hundreds of thousands of dollars to Maui and Hawaii as well as millions in media impressions.

**Maui TechOhana**

- In partnership with the Small Business Development Center, MEDB works to support small businesses and provide a quarterly networking program showcasing new companies that are creating buzz.
- The TechOhana lunch gatherings have become sold out successes this year, offering a range of stimulating speakers from a serial entrepreneur in the wireless industry to a seasoned inventor of renewable technologies.

- How to compete for federal R&D dollars to develop innovations
- Basics and advanced tips on proposal writing
- How to protect intellectual property
- Strategies on commercializing SBIR projects  
Networking with local successful SBIR companies

**The Federal Network**

MEDB belongs to the Federal Network, a consortium of defense-related businesses on Maui, working together to develop strategic business partnerships. Our goal is to use the group's strengths including its world-class research & development, to take high tech in Maui to the next level.

- A good example of the Federal Network's "group think" was a meeting MEDB arranged with Steve Goodfellow and John Maloney of Pacific Rim Land. Steve provided a brief history of PacRim's current Maui Research & Tech Park projects and expressed his interest in assessing the current best practices for parks of this kind then revisiting MR&TP's uses and strategic marketing plan.
- Industry reps shared their perspective on what could best help, as MR&TP rethinks its future development.

**Federal Contracting Workshop**

In partnership with Boeing and the Air Force Research Laboratory, MEDB presented a workshop on "Contracting with the Federal Government for Small Businesses"

- Led by seasoned contracting officers from Air Force Research Laboratory and Boeing, the workshop provided an orientation and valuable advice on contracting opportunities.
- Over 40 participants from business took advantage of the free 6-hour workshop

**Hawaii Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) Conference**

*November 14, 2007 Wailea, Hawaii*

Presented by the High Technology Development Corporation, this biennial conference is an exceptional opportunity to learn about federal research dollars and go one-on-one with federal grant managers. Participants learned:







## PROGRAM GOAL

Prepare Maui County's residents to compete for 21st century careers by improving Maui County's capacity to **educate, train and provide skill-based experiences**

Our Women in Technology-initiated STEM programs are now firmly entrenched across the state and currently impact over 6,000 Hawaii students, educators and industry professionals annually.

### STRENGTHENING EDUCATION TO WORKFORCE PIPELINE

#### Project EAST

For students interested in science, technology, engineering and math (STEM), Project EAST continues to expand in scope and provide meaningful opportunities for island students. By leveraging federal investment with Maui County and private sector funding, WIT was able to increase training opportunities, enabling students to gain the real world skills to compete in the global market place.

#### Industry Day focuses on real world technology

- EAST students from five Maui and Molokai high schools were given a relevant look into real world technology at our first annual Industry Day, September 25, 2007 in the Maui Research & Technology Park.
- Industry representatives from different sectors of Maui's tech community offered a valuable overview of 21st century careers and software applications to over 100 students and school facilitators.
- During the half-day event, students heard firsthand how the software programs they are currently using in their labs apply to the real world — from engineering

design to computer-aided design, geographic information systems to 3D imaging, global positioning systems to webpage graphics.

- Representatives from Oceanit, Pacific Disaster Center, the Maui Economic Development Board and Sae Design talked about the software they use, presented examples of their work and discussed career preparation and options.

*"By giving students a glimpse of the inside process, we were trying to help them connect the dots between the software tools they've been using in the labs with the corresponding applications in industry."*

— EAST Project Manager Isla Young

#### King Kekaulike student wins EAST logo competition

- Peter Lanse, an 11th grader at King Kekaulike High School, won the national Project EAST 2008 Conference Logo Competition. Peter's logo entry emerged as the best of the best. He plans to major in web or graphic design in college.
- Over 130 logo entries from five states and 46 different EAST programs were submitted, centering upon the conference theme: "Building a path. Leaving a trail."

#### 2008 EAST National Partnership Conference held

- Thanks to WIT and County funding support, 49 Maui EAST students and advisors were able to attend the national conference held February 27 - March 1, in Little

Rock, Arkansas. They joined over 2000 students from six states to present their projects and compete for top awards.

- Nine Hawaii schools including Maui High, Baldwin High, Kihei Charter, King Kekaulike, Lahainaluna High, Chiefess Middle, Kea'au High, Molokai Middle and High schools participated in the prestigious awards competition and brought national recognition to Hawaii.
- Maui High School and King Kekaulike High were both chosen as Founder's Award finalists, from among the top ten EAST programs in the country. The overall award recognizes the EAST school that best exemplifies the following criteria: Student Growth, Collaboration and Community Achievement, Innovative Use of Technology.

*“EAST has helped me become a better learner and a better citizen...ready to solve the problems of the future through self-education and professionalism.”*

— Vanessa Viloria, Maui High graduate

### IsisHawaii

A major partnership with isisHawaii on Oahu has allowed WIT to expand and diversify its scope of services while strengthening its overall reach in STEM education and work-force development statewide.

#### RoboticsHawaii popularity accelerating

Interest in scholastic robotics has been increasing statewide. In 2008, legislators appropriated Act 111 state funding to support all national scholastic robotics programs currently in Hawaii. MEDB, with our EDB partners, have allocated WIT funding to support robotics in Hawaii for almost a decade, positioning us among the first organizations to invest.

#### • Robofest Hawaii

WIT/isisHawaii organized the Hawaii exhibition for Robofest, a national scholastic robotics program created by Lawrence Technological University. Over 150 parents, administrators, supporters, students and spectators attended.

#### • Botball

The WIT-sponsored Farrington High School team on Oahu placed well at the National Botball Tournament, held this year in Hawaii. Out of 70 international

teams, 20 were selected as semi-finalists, 5 of those teams from Hawaii. Farrington High in their rookie debut ranked 16 out of 20.

#### FIRST LEGO League Hawaii expands

Through isisHawaii/WIT support, FLL team numbers increased from 24 in 2006 to 83 in 2007

- A survey sampling showed a balanced gender and minority participation: 46% girls, 54% boys; 50% were under-represented ethnic minorities.
- WIT/isisHawaii offered an FLL workshop and training series, attracting 61 public school educators/coaches, representing 40 new schools
- Through WIT Oahu partnerships, the workshops also attracted five new Girl Scout teams and 9 4H teams from Maui and the Big Island.

#### One+One eMentoring expands to health sciences

isisHawaii partnered with the John A. Burns School of Medicine's Hawaii/Pacific Basin Area Health Education Center to launch isisHealth, a pilot project at Kapolei High School's Health Academy which boasts 90 registered students.

- The goal is to provide students with information about health science careers and connect them with local healthcare professionals in on-line mentoring partnerships for educational guidance and career exploration.
- Through the combined network of partners that isisHawaii and the Area Health Education Center, students will have the opportunity to gain insight and knowledge from active local healthcare professionals working in a wide range of fields from Dentistry to Veterinary Medicine, from BioEngineering to Diagnostics to Rehabilitation.

#### Hawaii Technology Development Venture (HTDV) partnership

- A new partnership has been initiated with HTDV whose mission is to utilize the capabilities of Hawaii-based small businesses in technology efforts related to Department of Navy and Defense programs.
- This includes support of Defense & Dual Use Network of Hawaii, TechEnterprise and HTDV Education series.

### MIT Women's Initiative Project

Each year, the MIT Women's Initiative Program selects ten school sites nationwide to reach out to young women about the exciting profession of engineering.

- In early 2008, WIT Oahu formed a dedicated MentorNet team to review and refine recruitment strategy at ten UH campuses throughout the islands. So far this year, WIT helped recruit over 50 new student protégés, matching them with mentors in Hawaii and around the globe.
- In addition, WIT scheduled "What is an Engineer?" presentations on Oahu, Maui, Hawaii Island and Kauai. The events reached over 600 middle and high school girls.

### MentorNet

This national award-winning e-mentoring program has been especially effective for women by providing real-world access to professional networks often unavailable to them in the male-dominated fields of science and engineering.

- In early 2008, WIT Oahu formed a dedicated MentorNet team to review and refine recruitment strategy at ten UH campuses throughout the islands. So far this year, WIT helped recruit over 50 new student protégés, matching them with mentors in Hawaii and around the globe.

### Invention Factory (IF)

WIT Oahu is a grant partner with the Invention Factory (IF). Through hands-on, project-based instruction, IF students are taught how to rebuild electronic toys so that children without the necessary motor skills can play with them. In the process, students learn valuable engineering skills and concepts they can carry forward to future engineering careers.

- In April, Stevenson Intermediate Invention Factory (IF) team presented disabled children from Jefferson Elementary's Orthopedic Unit with store-bought electronic toys modified specifically for their use. Congresswoman Mazie Hirono and Hawaii State Senator Gordon Trimble were on hand to greet children and staff.
- WIT/isisHawaii recruited engineering professionals to speak to IF students, parents and teachers at this event. 60 people attended.

### Society of Women Engineers (SWE) Hawaii

WIT sponsored ten SWE Hawaii members who made the trek to Nashville for the 2007 SWE National Conference.

They joined 4000 participants for three exciting days filled with sessions, tours, networking, and career opportunities. The Hawaii SWE team took third place in the national website competition.

### Ke Alahele Education Fund

The Ke Alahele Education Fund was created by the Maui Economic Development Board to help local educators, individuals, parent groups and other organizations enhance student learning as well as augment their own professional development.

In 2007, 22 Ke Alahele awards were given out benefiting 1600 students throughout Maui County, including our first interns who gained valuable work experience with host employers MHPCC and PDC.

*"The Ke Alahele grant enabled me to instill a sense of excitement in my students about science..."*

*—Cathryn Smith, Haiku Elementary*

### Excite Camp

At the 7th annual Excite Camp event held on July 11-13, 2007, WIT partnered with Maui Community College, the UH Institute of Astronomy, Akimeka, Monsanto, Maui High Performance Computing Center, Northrup Grumman, Oceanit, Pacific Disaster Center, and the US Air Force to host various Camp activities at a number of Maui sites.

- The goal of the Camp is to educate and excite girls in the STEM fields, while building self-esteem through aligning culture and science.
- Activities were led by a number of young mentors, including Kawai Kuluhiwa, a recent astronomy graduate from UH Hilo, who integrated her native Hawaiian culture into every aspect of the three-day event.

### Tech Careers Day: I Am The Future

Nearly 60 students from five Maui high schools got firsthand exposure to science and technology fields as part of the tenth annual Tech Careers: I Am the Future event, October 25-26, 2007.

- Held at the Maui Research & Tech Park in Kihei, the popular two-day sessions are designed to introduce and motivate students toward careers in science, technology, engineering and math (STEM).
- WIT led an industry partnership with prominent technology-based companies including Akimeka, Boeing, Maui High Performance Computing Center, Monsanto, Oceanit, Pacific Disaster Center and Textron, as well as the County of Maui, University of Hawaii-Institute for Astronomy and the U.S. Air Force.

### High Tech Maui Holiday Job Fair

The sixth annual High Tech Maui Holiday Job Fair was held at the Maui R&T Park in December 2007. WIT partnered with Kama'aina Careers and the Maui County Workforce Investment Board to host this targeted event for technology job seekers.

- Overall, 200 applicants were given the opportunity to meet with employers and have their resumes reviewed. Interested participants were able to pre-register and submit resumes via the High Tech Maui website, becoming part of the HTM skill set database.
- Participating employers included: Akimeka, the Boeing Company, County of Maui, Lockheed Martin, Maui High Performance Computing Center, Maui Memorial Medical Center, Oceanit, Pacific Disaster Center, Textron Systems and more.
- Held each year, the popular High Tech Job Fair offers students and former residents a unique chance to check out job opportunities while they are home for the holidays. At the same time, it gives Maui-based companies a way to relay company information and recruit skilled kama'aina who are motivated to return home to live and work in Hawaii.

### Introduce a Girl to Engineering Day (IGED)

Maui's eighth annual Introduce a Girl to Engineering Day was held on February 21, 2008. The goal of this program is to expose girls to the field of engineering and encourage them to become engineers themselves.

- Thirty 7th and 8th grade girls from Iao, Kalama, Lahaina, Kihei Charter and Maui Waena Intermediate schools were invited to job-shadow local engineers from private sector companies and County of Maui engineering departments.
- The day-long event was a huge success. It included an educational video showcasing the various types of engineering careers as well as a fun, hands-on

engineering activity to build a "spaghetti bridge."

- IGED has been organized and hosted for the past eight years by the WIT Project in collaboration with the Hawaii Society of Engineers-Maui Chapter and the County of Maui.

### Tech Connect 2: A Night with the Stars

A Night with the Stars was the theme of the second annual 4-H Tech Connect event sponsored by WIT and 4-H Maui. Maui EAST students documented the evening with photos and video.

- The free event was held on May 2 at the Institute for Astronomy's (IFA) Waiakoa facility in Kula, and open to anyone interested in the science, technology, engineering and math (STEM) fields.
- Along with a presentation from astronomer J.D. Armstrong, students got to take a peek through a high-powered telescope. Oceanit scientist Kawai Kuluhiwa explained how ancient Hawaiians navigated with their own form of star charts. Oceanit scientist James Firth conducted a fun Astronomy Jeopardy.

### Middle School Tech Careers: I Am The Future

Over 55 students from Maui County middle schools got firsthand exposure to a wide range of science and technology fields at the 2008 Middle School Tech Careers: I Am the Future event held May 29-30.

- This year's participation reflects an impressive 45% increase over 2007's groundbreaking science, technology, engineering and math (STEM) awareness event targeted at younger students.
- Participating middle schools included Iao, Kalama, Lahaina, Maui Waena. New funding also allowed middle schools from Lanai and Molokai to participate as well. Although priority was given to public schools, there were also one or two representatives from St. Anthony and Emmanuel Lutheran.
- With new education sponsorship funding from the Air Force Research Laboratory (AFRL), the two-day sessions began with interactive sessions at high tech companies such as Akimeka, Boeing, Maui High Performance Computing Center, Monsanto, Oceanit and the Pacific Disaster Center. The second day culminated with a tour of the observatories atop Haleakala.

## Kama'aina Come Home

WIT partners with Kama'aina Careers to help bring Hawaii talent back into the island workforce.

- New 2008 initiatives included presentations at university Hawaii Clubs, meetings at campus career centers and with local families at large Hawaii-inspired events and festivities.
- Key mainland cities were covered in Oregon, Washington, Colorado, as well as Las Vegas, St. Louis and San Diego.

## EDUCATING THE EDUCATORS

### Statewide Department of Education Tech Coordinator Conference

*October 26-27, 2007 Kihui, Hawaii*

- The Women In Technology project was proud to be an event sponsor for the statewide Tech Coordinator Conference held on Maui.
- Over 300 teachers participated in the event adding many new contacts for our educators database. In addition to a staffed booth, WIT provided a comprehensive capacity building workshop highlighting science, tech, engineering, and math.

### AEJEE/GIS Workshops

*June 26 & June 30, 2008 Molokai, Big Island*

WIT helped recruit educators for this introductory Geographic Information System (GIS) workshop, which was offered in two parts: the first on June 25 at the Molokai Adult Education Center and on June 30 at UH Hilo's North Research Center.

- The statewide initiative is targeted at computer-literate science, math or social studies teachers, grades 6-12, and tech coordinators who want to learn GIS basics.
- Instructors used ArcExplorer – Java Education Edition (AEJEE), a free desktop application specifically designed with the K-12 audience in mind. AEJEE allows students and teachers to accomplish many of the basic GIS spatial processes on both Windows and Mac platforms.
- Upon completion, each teacher received a \$150 stipend, wall maps, a jump drive containing Hawaii mapping data and ongoing online support.

## Agriculture Awareness Workshops

*June 12-13, 2008 Kahului, Maui*

- This highly informative, two-day DOE accredited development workshop was created for Maui middle and high school teachers to help increase agricultural awareness in their classrooms.
- Workshop topics included: the latest advancements in agriculture, 21st century agricultural careers in Hawaii, the Hawaii Career Pathway system, lesson development to communicate agriculture information to students in the classroom

## PRESENTING STEM MODELS

### 2008 WEPAN National Conference

*June 8-11, 2008 St. Louis, Missouri*

WEPAN is a national not-for-profit organization with over 600 members from nearly 200 engineering schools, small businesses to Fortune 500 corporations, and non-profit organizations.

- WIT Director Leslie Wilkins, WIT Project Manager Jenilynne Gaskin and Cultural Advisor Kawai Kuluhiwa traveled to St. Louis to present a paper on the effectiveness of our Excite Camp model, now in its seventh year.
- Entitled "Honoring Culture, Diversifying the Workforce, Strengthening Science", the paper focused on keeping native Hawaiian middle school girls engaged in math and science in Hawaii.

### 2008 American Society of Engineering Educators (ASEE) National Conference

*June 22-25, 2008 Pittsburgh, Pennsylvania*

The ASEE Annual Conference & Exposition hosts over 400 plus technical sessions spanning all disciplines of engineering education.

- At this year's conference, WIT Director Leslie Wilkins and Project Manager Isla Young presented a paper based on our standout Project EAST program, entitled "Service Learning: Community and Cultural Values that Engage Under-represented Groups into the STEM Pipeline."
- One of WIT's most successful statewide models, Project EAST is a project-based, service-learning program that provides students with the most current, high-end technologies available in the most progressive fields in the world.



## Skog receives Stephen L. Jackstadt Award

Jeanne Skog, CEO and President of the Maui Economic Development Board, was awarded the Stephen L. Jackstadt Award for her outstanding support of economic education.

Ms. Skog was instrumental in overseeing the addition of economic education to MEDB's mission to ensure Hawaii residents are provided with abundant opportunities for rewarding employment. She joins a distinguished list of prior award recipients, including U.S. Senator Daniel K. Akaka, Governor Linda Lingle and University of Hawaii President David McClain.

Hawaii Council on Economic Education May 6, 2008

Award recipient Jeanne Skog with Executive Director Kristine Castagnero, Hawaii Council on Economic Education

## PROGRAM GOAL

Expand support for **policies and funding** that ensure the availability of sustainable living wage jobs throughout Maui County

### REACHING OUT THROUGH PARTNERS

Each year, MEDB staffers meet with key government officials and participate in organizations with similar goals to help expand our education to workforce objectives.

These include federal, state and county leaders, as well as organizations such as A Keiki's Dream, Maui Chamber of Commerce, Hawaii Council on Economic Education, Maui Visitors Bureau, Mental Health Association, Tri-Isle R C & D Council, Women's Fund of Hawaii, Business and Professional Women USA, Economic Development Alliance of Hawaii, State EPSCoR Committee, Nonprofit Directors Association, Hawaiian Immersion, and 4H.

#### State Legislators get high tech tour

In an effort to share Maui's technology story with as many policymakers as possible, MEDB hosted Sen. Roz Baker, Chair, State Ways & Means Committee and her colleagues – Senators Shan Tsutsui, Kalani English, Gary Hooser (Kauai), Donna Kim (Oahu) and three legislative aides.

- MEDB arranged a tour to four of Maui's tech companies – Akimeka, Ambient Micro, Trex Enterprises and Oceanit.
- These leaders have figured significantly in Act 221 that provides tax incentives for technology companies and in particular, Project EAST and MEDB's building funding.

#### Congresswoman visits Maui R&T Park

In August 2007, Congresswoman Mazie Hirono paid a visit to the Maui Research & Technology Park, dividing her time between Maui's new AFRL Commander Mark Leonard, MHPCC's newly opened JAWS computing center and MEDB's STEM Academy, otherwise known as the Kihei Charter Middle School.

- WIT hosted a luncheon for the congresswoman, where she met with 20 young women who have participated in various STEM-related programs.
- The students presented their experiences and were joined by their industry mentors. Rep. Hirono shared her first year as a member of Congress and her plans for the upcoming election.

#### Maui Health Care Task Force

The Maui Health Initiative Task Force was created by the Hawaii State Legislature in 2007 to give the communities of Maui, Molokai and Lanai the opportunity to provide direction for the future of health care services and infrastructure in their county.

- MEDB's Jeanne Skog served on the Acute, Primary and Emergency Care Committee – one of the investigative subcommittees of the task force studying our county's health care needs.
- After four months of listening to experts, reviewing data, breaking up into committees and conducting publicly noticed meetings, task force members developed an overarching health care goal statement for the county, and agreed on a set of priorities that they believe must be implemented to provide a high quality of health care in Maui County.

**EDAH presents to 2008 Senate committee**

- In January, the Economic Development Alliance of Hawaii (EDAH) was asked to update the state Senate Economic Development committee chaired by Carol Fukunaga.
- Along with other EDBs statewide, MEDB CEO Jeanne Skog had the opportunity to tell senators about our latest education/workforce programs, in an effort to seek the State's partnership for ongoing and future STEM initiatives.
- EDAH will be handling the \$1.1 million state funding recently released for support of MEDB/WIT sponsored Project EAST and other project-based learning.

**Harbors Modernization Plan**

- The state Department of Transportation officials came to Maui to meet with MEDB, the Maui Visitors Bureau and Maui Chamber of Commerce on the proposed Harbors Modernization Plan.

- Maui stands to see significant changes in Kahului Harbor if plans go through and anticipating the impact will be critical. The EIS process is ongoing.

**Hawaii Clean Energy Initiative**

In January 2008, the State signed a Memorandum of Understanding with the U.S. Dept. of Energy for the Hawaii-DOE Clean Energy Initiative. The purpose of the initiative is to decrease energy demand and accelerate the use of renewable resources to provide 70% of Hawaii's energy consumption by the year 2030.

**Directed Energy Professional Society**

MEDB was pleased to begin a new funding partnership with the Directed Energy Professional Society (DEPS). As part of its education to workforce mission, MEDB's Women in Technology Project provided the grant and fiscal management for DEPS funding to expand equipment and training capacity in the Electronics and Computer Engineering Technology Lab (ECET) at Maui Community College.



Launch of Economic Cadre with Maui teachers



### Maui hosts Pacific Century Fellows

Each year, young leaders from business, government and nonprofit organizations across the state are selected for the Pacific Century Fellows program -- hands-on sessions that introduce them to Hawaii's current assets, challenges and opportunities.

- As part of the 2008 program, Maui was chosen to host an afternoon of technology-oriented sessions at the MR&T Park.
- Thirty-five Fellows heard presentations from MEDB, Maui High Performance Computing Center, Pacific Disaster Center and Oceanit.
- The next day, they toured space surveillance facilities atop Haleakala and were briefed on their unique scientific, economic, cultural and environmental significance.

- Economic Development Alliance of Hawaii
- Hawaii Council on Economic Education
- Hawaii Womens Fund
- Hui Malama
- Maui Chamber of Commerce
- Maui Food Technology Center
- Maui Historical Society
- Maui Nonprofit Directors Associations
- Maui Redevelopment Agency
- Maui Visitors Bureau
- Tri-Isle Resource Conservation & Development Council

### County's General Plan underway

Looking comprehensively at the range of factors that influence the physical development of our community, Maui County's proposed General Plan will provide a guide for future growth of the island to the year 2030.

- MEDB CEO Jeanne Skog serves on the 25-member General Plan Advisory Committee to develop recommendations to the Planning Director of the Maui Island Plan.
- The impact of the Maui Island Plan will be sweeping for the present and future generations of island residents; therefore, the community input from FMN's Walk-Story and PlanStory will become increasingly relevant.
- The GPAC completed its review of the Policy Plan. Since the county General Plan will become the defining statement of our residents' needs and desires, it will ultimately incorporate the Maui Island Plan and the recommendations of Focus Maui Nui, the countywide visioning process launched by MEDB in 2003.

## PARTICIPATING IN THE COMMUNITY

The MEDB staff is encouraged to assist the community through active participation in boards and groups. These activities help achieve our mission through the work of organizations with complimentary goals. In 2007, staff volunteered time as members of:

- A Keiki's Dream
- Business and Professional Women

**stem.**  
science **tech** engineering **math**



**Partners  
in Hawai'i  
making it  
happen...**

**It takes a  
village...**

- Students*
- Educators*
- Parents*
- Administrators*
- Legislators*
- Community*
- Organizations*
- Businesses*
- Higher Ed*
- Industry*
- Government*
- Neighbors*
- Media*
- Kupuna*

Women in Technology partners with The Honolulu Advertiser to publish the third annual STEM Tabloid.

## PROGRAM GOAL

Provide **research and analysis** on economic issues that promote informed decision-making within the Maui County community

### PUBLISHING INFORMATION

#### 2008 STEM Tabloid

- The third annual STEM tabloid was developed and published by WIT/MEDB and the Newspaper in Education (NIE) program as a supplement to the Hawaii Advertiser newspaper on March 26, 2008.
- This year's theme – "It Takes a Village" -- is based on the establishment of community partnerships to advance STEM education and outreach in Hawaii.
- The STEM tabloid is distributed to 150,000 households statewide, as well as a range of local and national events including the 2008 National Science Teachers' Conference in Boston, the Native Hawaiian Educators Conference in Windward Oahu, the Hawaii State Science & Engineering Fair and FIRST Robotics Regional Competition.

#### 2008 Next Step Report

- The Next Step Report is Focus Maui Nui's first effort to begin to benchmark, collect and report data points that can help the community understand the progress of its community-wide vision.

- The benchmarking document is constantly evolving over time, creating a "living document" which will be updated periodically to include new, more effective measuring tools and action plans that currently reflect the state of Maui County.
- For the 2008 benchmark, the FMN committee reached out to residents, organizations and government to contribute through comments, suggested action plans, data sources, ideas for data points and gathering data.
- After comprehensive review, the committee came up with 150 data points and action steps. A full copy of the Next Steps Report can be found at [www.focus-maui.com](http://www.focus-maui.com).

#### Stepping Forward 2008

- In early 2008, a Stepping Forward tabloid insert highlighting the major data points from FMN's Next Step Report was published by MEDB in partnership with The Case Foundation, County of Maui and The Maui News.
- The tabloid provided a snapshot of the latest data on a range of community issues from education and environment to economic development, culture, housing and transportation.

- Stepping Forward also provides action steps for individuals as well as businesses to get involved in creating and sustaining a balanced Maui Nui.

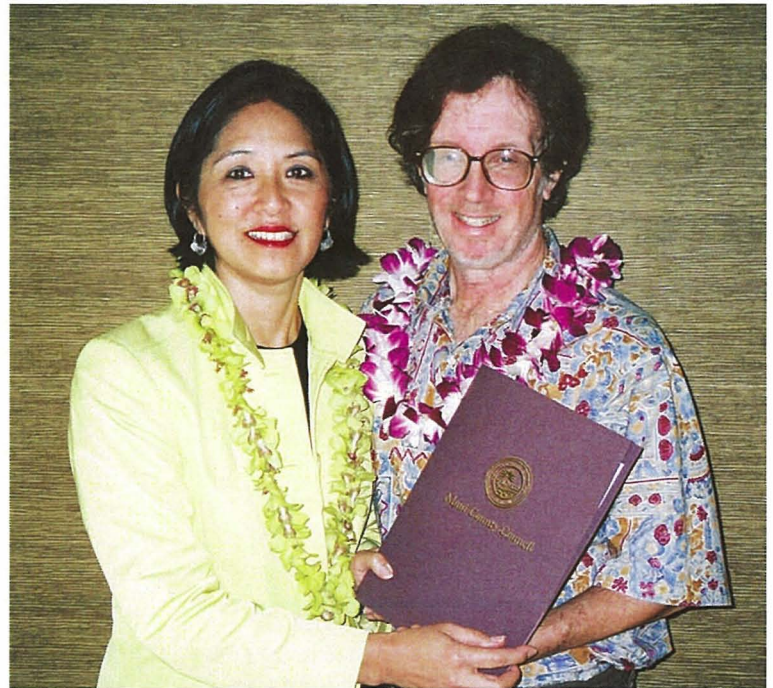
#### Hawaii Innovators newsletter

- In March 2008 WIT partner, isisHawaii, published a new HTDV newsletter -- Hawaii Innovators -- to showcase the high tech industry in Hawaii including the lead feature on MEDB's latest STEM programs.

## SHARING BEST PRACTICES

The following WIT research papers have been accepted, presented and published at the following national conferences:

- 2007 Environmental Systems Research Institute (ESRI) International Conference: Building Technology Skills While Serving your School and Community
- 2007 ESRI International Conference: Learning About the Environment Through Community Projects
- 2007 ESRI International Conference: Enhancing Learning with GIS in K-12 Education and Youth Programs
- 2007 Experimental Physics and Industrial Control System (EPICS) Conference National Conference: Project EAST presentation & Poster Presentation
- 2007 American Society of Engineering Education (ASEE) Conference & Exposition: Aligning Indigenous Culture with Science
- 2007 ASEE Conference & Exposition: isisHawaii: The Power of One-Plus-One Brings Girls into the Science and Engineering Pipeline
- 2007 ASEE Conference & Exposition: Mentornet's Wisconsin And Hawaii Statewide Initiatives
- 2008 ASEE Conference & Exposition: Service Learning: Community And Cultural Values That Engage Under Represented Groups Into The Stem Pipeline
- 2008 Women in Engineering Proactive Network (WEPAN): Honoring Culture, Diversifying Workforce, Strengthening Science



Jeanne Skog joins Hap Malcolm, son of MEDB's first President Donald Malcolm, in accepting Maui County Council resolution recognizing the many contributions of Donald Malcolm in diversifying Maui County's economy. Donald G. Malcolm posthumously provided a legacy gift to MEDB in support of research and analysis that promote informed decision making.

## BOARD OF DIRECTORS

(As of November 20, 2008)

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Executive Director  
Hawaii Operating Engineers Industry Stabilization Fund

### The Honorable Rosalyn Baker

Senator  
State of Hawaii

### Mr. Eugene Bal

Executive Director  
Maui High Performance Computing Center

### Mr. Ryther Barbin

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Monsanto Company

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Central Pacific Bank  
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Maui Land & Pineapple Company, Inc.  
Maui Memorial Medical Center  
Northrop Grumman Systems Corporation  
Oceanit  
Pacific Disaster Center  
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#### Educator \$10,000

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Central Pacific Bank  
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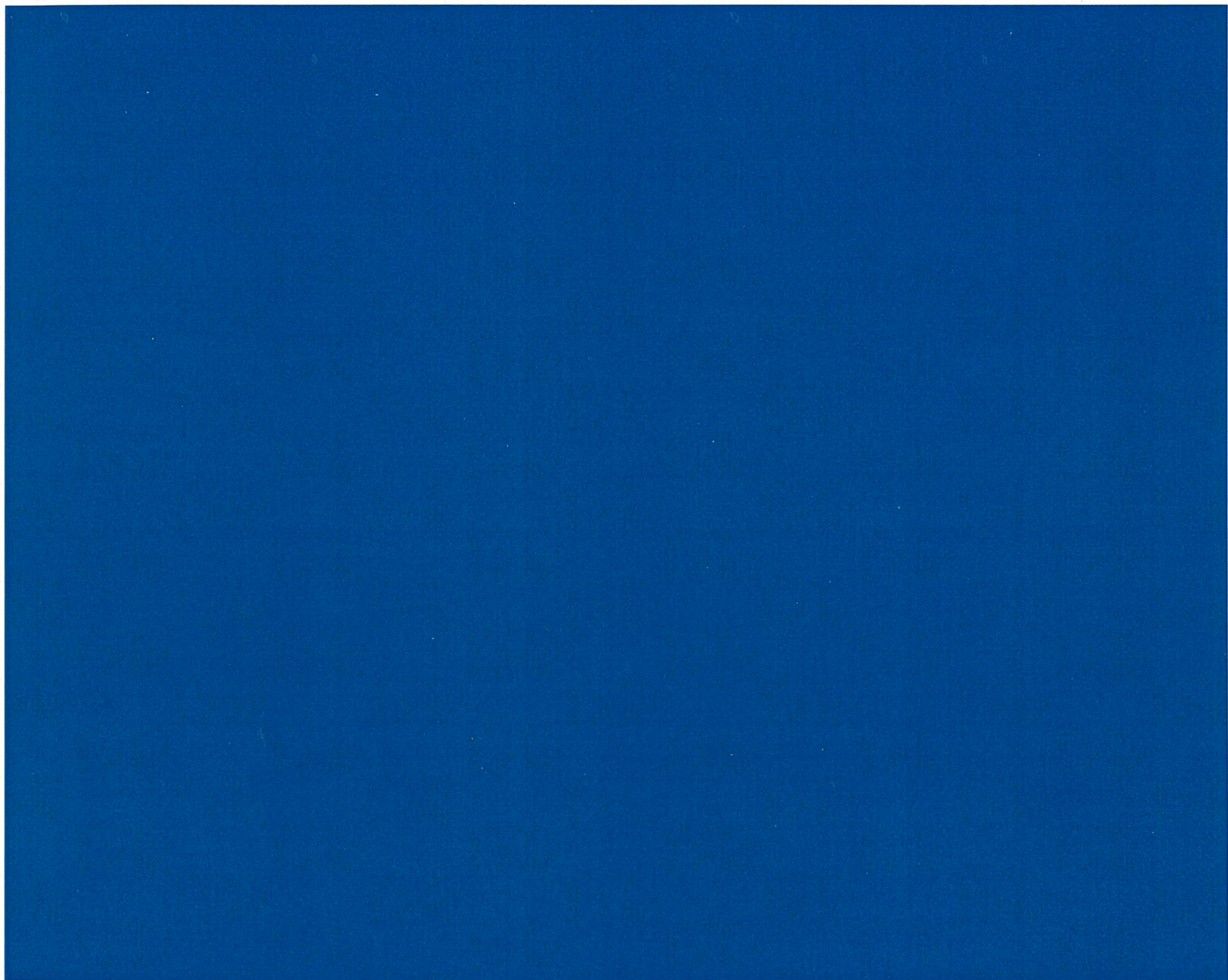
## STAFF ASSOCIATES

Jeanne Unemori Skog, President  
Leslie Wilkins, Vice President

Alexa Betts Basinger  
Pam Benson  
Leilani Bulosan









maui economic development board, inc.

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## KAUAI ECONOMIC DEVELOPMENT BOARD

**2009**

**Informational Briefing before the  
Senate Committee on Economic Development &  
Technology**

**February 13, 2009**

**1:15 pm, Conference Room 016**

**State Capitol**

**Building a Successful STEM  
Pipeline for Kauai**



## The Basics

- **Use of Public/Private Grant Money**
  - \$293,377 YTD awarded to projects
  - \$286,899 U.S. Dept. of Education Grant
- **Teacher inspired**
- **Project-based**
  - 85 projects
- **Number of Student Impacted**
  - 4,400 students
- **Encourage public-private partnership**
  - 49 committed business & community partners
- **Involvement of Higher and Lower Education**
  - Dept. of Education, Kauai Community College, UH College of Engineering
- **Involvement of all Public Schools on Kauai**
  - 9- Elementary
  - 3- Middle
  - 3- High School



## STEM Related Projects

- **CSI-Kauai** (forensic)
- **Everything is “OK” on Kokee** (earth science)
- **Weather Stations in the Classroom**
- **Science clubs**
  - Elem. & Middle School
- **Rocketry clubs**
  - Middle & High School
- **Robotics**
  - Beginning (LEGO) – 6 Elem. Schools
  - Advanced (BotBall) – 5 Middle, 2 High School
  - Underwater Robotics – 2 High School
- **Robotics Expo** –
  - Island-wide public event (shopping mall)
- **Aqua-ponics**
  - Elementary, Middle School, High School
  - Stocking of fish for reservoir
- **Aqua-ponics/ Hydro-ponics** – High School
  - Raising fish & watering plant with water from fish pond
- **Wind Generator** (light a classroom)
  - High School
- **Electric Car**
  - High School
- **Building a Bio-Fuel Car**
  - High School
- **Making Bio-Fuel**
  - High School
- **Science Camps** (during school breaks)
- **Astronomy Clubs**
- **Ocean Studies** (ocean communities)
- **Native Plant Restoration**
- **Corn Propagation** (math concepts)
- **Vegetable Gardens**
- **Adopt a Wildlife Refuge**
- **Science Outreach Programs**
  - School Assemblies
  - Family Science Nights
  - Classroom Visits



## Fostering Public - Private Partnerships

- Industry/ Teacher network forums
- Adopt a School
- Internship sites
  - S & T members as mentors
- Science Fair judges
- Teacher workshops
  - Robotics, Rocketry
- Scientist in the Classroom
- Resource assistance with school projects & clubs
  - industry mentors
- S & T Student Workshops
  - Engineering Day workshop (algebra II students) – General Dynamics
  - Science Show (4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup> graders) Envisioneering

\*\*\*Acknowledgement: Utilize successful education models from Maui Economic Development Board's Women in Technology Program, Internship programs and Project EAST



# KAUAI ECONOMIC DEVELOPMENT BOARD

## Success Stories

- Waimea High – ROV underwater robotic club
  - 12 club members → 12 engineering scholarship awardees
- Build a Computer (10 girls, entering high school seniors)
  - 4 year tracking
    - Graduates:
      - License Practical Nurse
      - Mechanical Engineering
      - Mathematics
      - Electronic Technician
      - Biology
- Science Tech Companies (KEDB members)
  - 13 companies actively engaged with school projects/clubs providing direct contact with students.
- NCLB Assessment Results (Snapshot of Kapaa Middle & Chiefess Kamakahahei Middle Math Scores)

Chiefess: 2004-2005 - 19%	Kapaa: 2004-2005 - 14%
2005-2006 - 14%	2005-2006 - 17%
2006-2007 - 44%	2006-2007 - 20%
- Kauai Community College  
Running at full capacity in their math, science, life sciences and technology classes.
- 10 former interns have been hired by five technology companies



# KAUAI ECONOMIC DEVELOPMENT BOARD



STEM Internships



Scientist in the Classroom



Robotic Expo  
(Public Awareness)



Industry Mentorship





February 13, 2009

Hawaii State legislature  
State Capital  
Honolulu, Hawaii 96813

## STEM Activities Briefing

Committee on Economic Development and Technology  
Senator Carol Fukunaga, Chair  
Senator Rosalyn H. Baker, Vice Chair

Friday, February 13, 2009, 1:15 p.m., Conference Room 016

Enterprise Honolulu, the Oahu Economic Development Board, strongly supports activities to improve STEM skills in Hawaii schools and throughout the workforce. While the primary activities of the economic development boards are local business support, business retention and business recruitment; workforce development and the improvement of STEM skills are considered critical to our diversification efforts.

To this end we work closely with the other neighbor island boards in developing collaborative efforts and programs that expand STEM education and align the efforts with employer needs. Two such programs directly supported by Enterprise Honolulu include the NASA Robotics challenges and the Department of Energy “Real World Design Challenge”. Both of these programs involve K-12 classrooms in the design, construction, and operation of complex engineering challenges and involve the students with their teachers competing against other classes and against other states.

In 2007, the first year of the robotics challenge, eight teams from Hawaii competed. During 2008, the number rose to 33 teams with Hawaii teams participating in the national finals. The results show not only an increase in STEM education but an increase in female participation in the sciences.



**ENTERPRISE**  
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THE BUSINESS CLIMATE OF **PARADISE**

This year, the Real World Design Challenge was rolled out in partnership with the Department of Energy in 10 states, with Hawaii fielding 14 initial teams to design a wing for the next generation of commercial airliners. Three teams submitted final designs and the winner will move on to national competition.

These programs combine the elements of student teacher activities with the support of local companies acting as mentors to the students. In the case of the RWDC effort, BAE Systems assisted in judging the results and will provide valuable feedback on the actual designs and presentations.

In 2007 the State of Hawaii was one of six states to be awarded a National Governor's Association STEM grant, which included developing a *Web Portal*. The project management was awarded to Enterprise Honolulu and Jeff Bloom was hired to oversee the project. In keeping with the strategy to partner with other community projects, it was decided to combine both web- portal efforts to leverage resources and reduce costs. A group of representatives from industry, academia, government, and community organizations came together and developed a communications plan, agreeing that the portal would be branded MySTEM Hawaii. In June 2008 a team of students and industry mentors designed the portal, [www.MySTEMHawaii.org](http://www.MySTEMHawaii.org). The portal continues in development and will be released in the Spring of 2009 to include the tools below:

- MySTEM Hawaii web portal [www.mystemhawaii.org](http://www.mystemhawaii.org)
- MySTEM Hawaii, Program Directory
- MySTEM Hawaii PSA (see video link on MySTEM Hawaii portal)

These are just a few examples of the efforts to develop STEM activities by the economic development boards. Enterprise Honolulu, the Oahu Economic Development Board, supports STEM Education activities throughout Hawaii.

A handwritten signature in black ink, appearing to read "John R. Strom". The signature is fluid and cursive, with the first name "John" and last name "Strom" clearly legible.

John Strom

VP Director of Business Development & Technology