



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



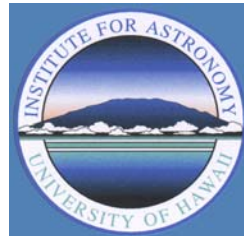
referentia



TEXTRON Systems



hV PHOTONICS



Schafer



NORTHROP GRUMMAN
Information Technology



TREX  HAWAII, LLC





A woman with long dark hair, wearing a white lab coat, is smiling and looking towards the camera. She is in a laboratory setting, with another person in a blue lab coat visible in the background. The background shows laboratory equipment and a clean, professional environment.

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

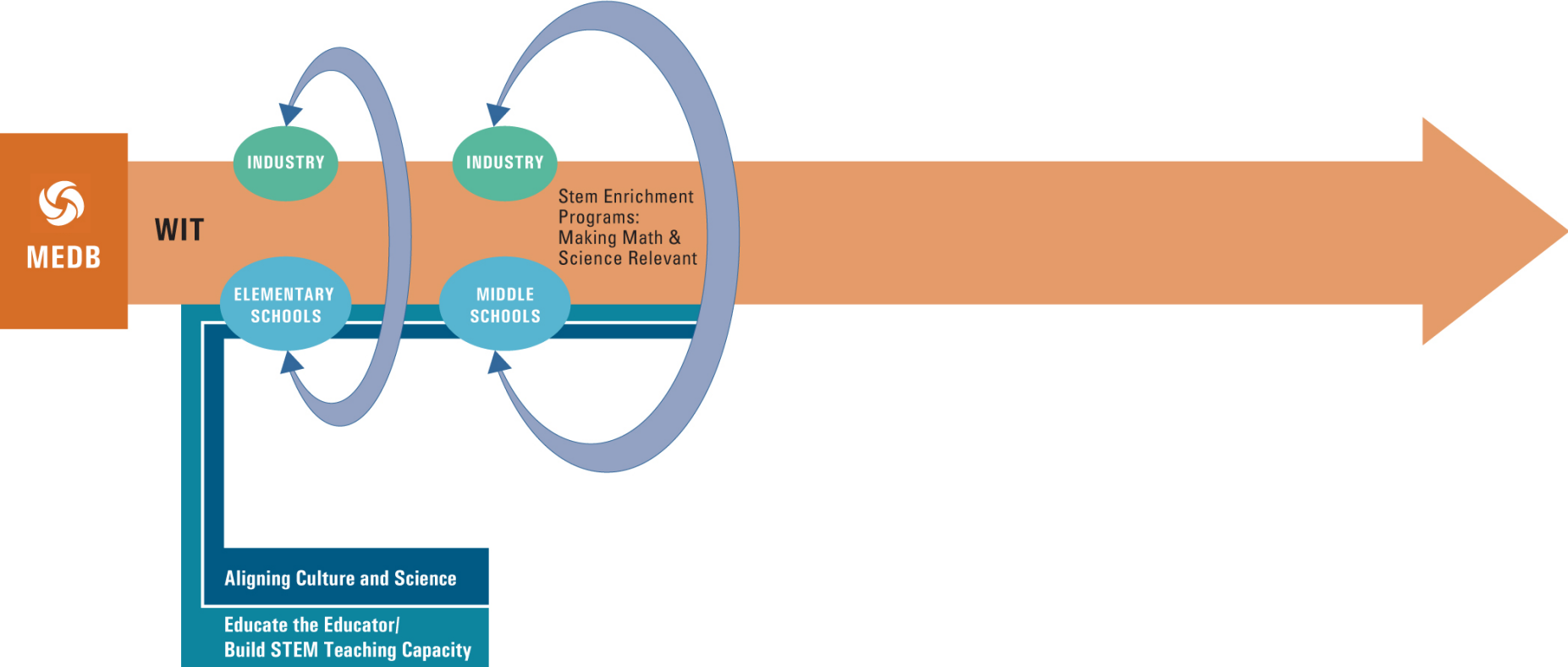
BUILDING THE STEM PIPELINE

A Model for Inclusion



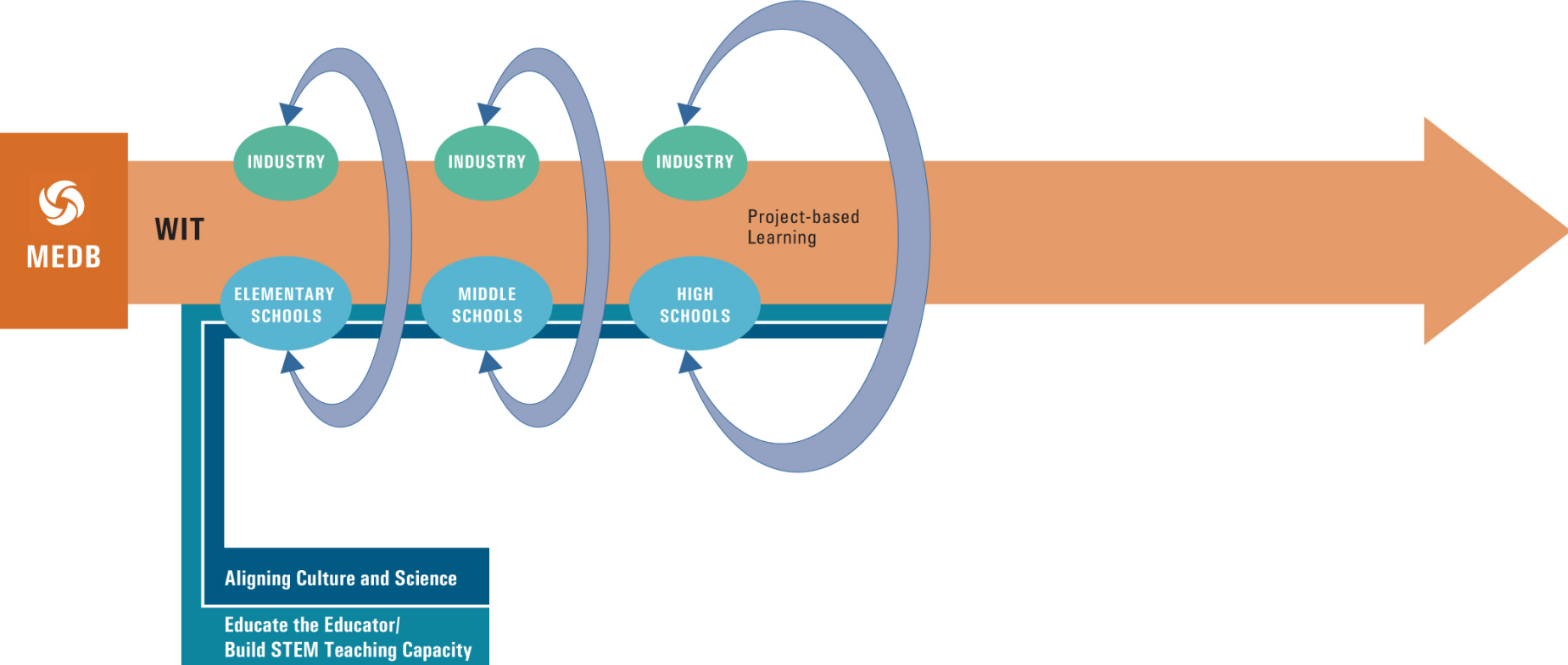
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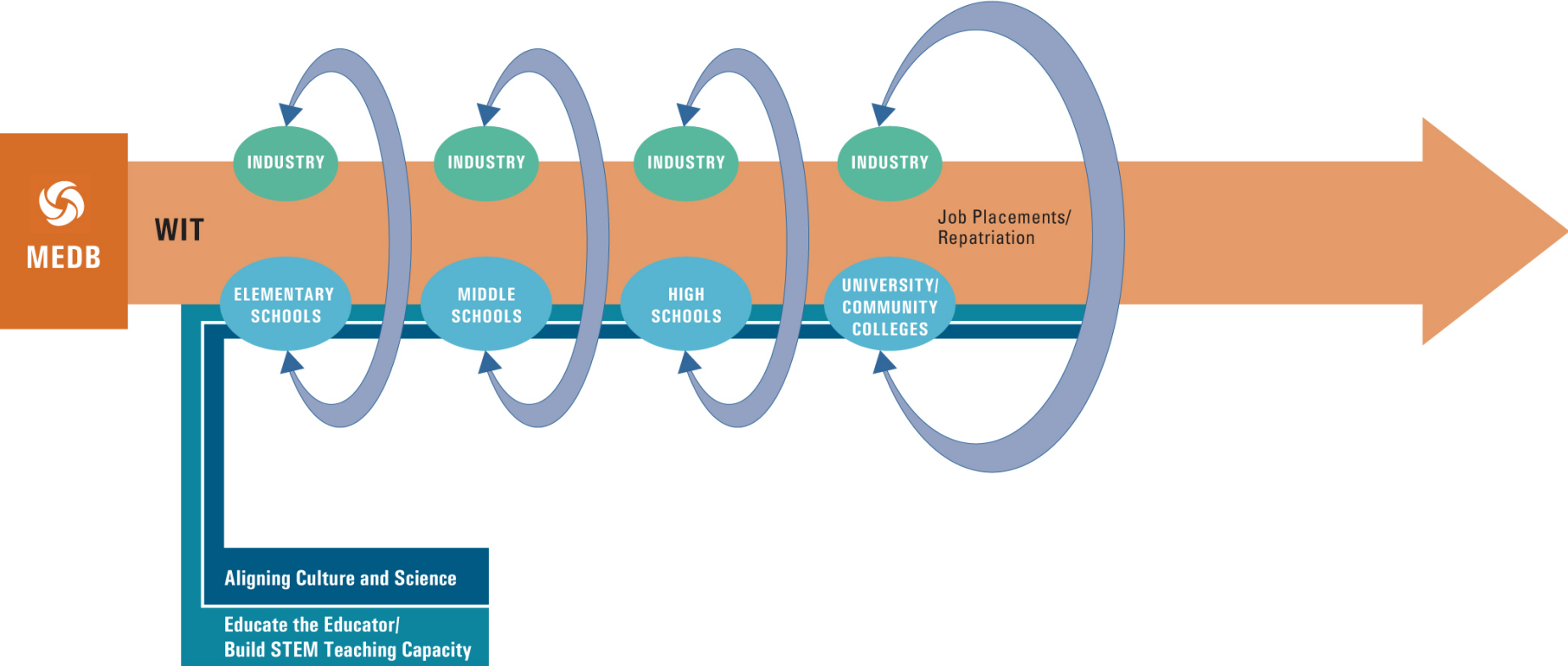
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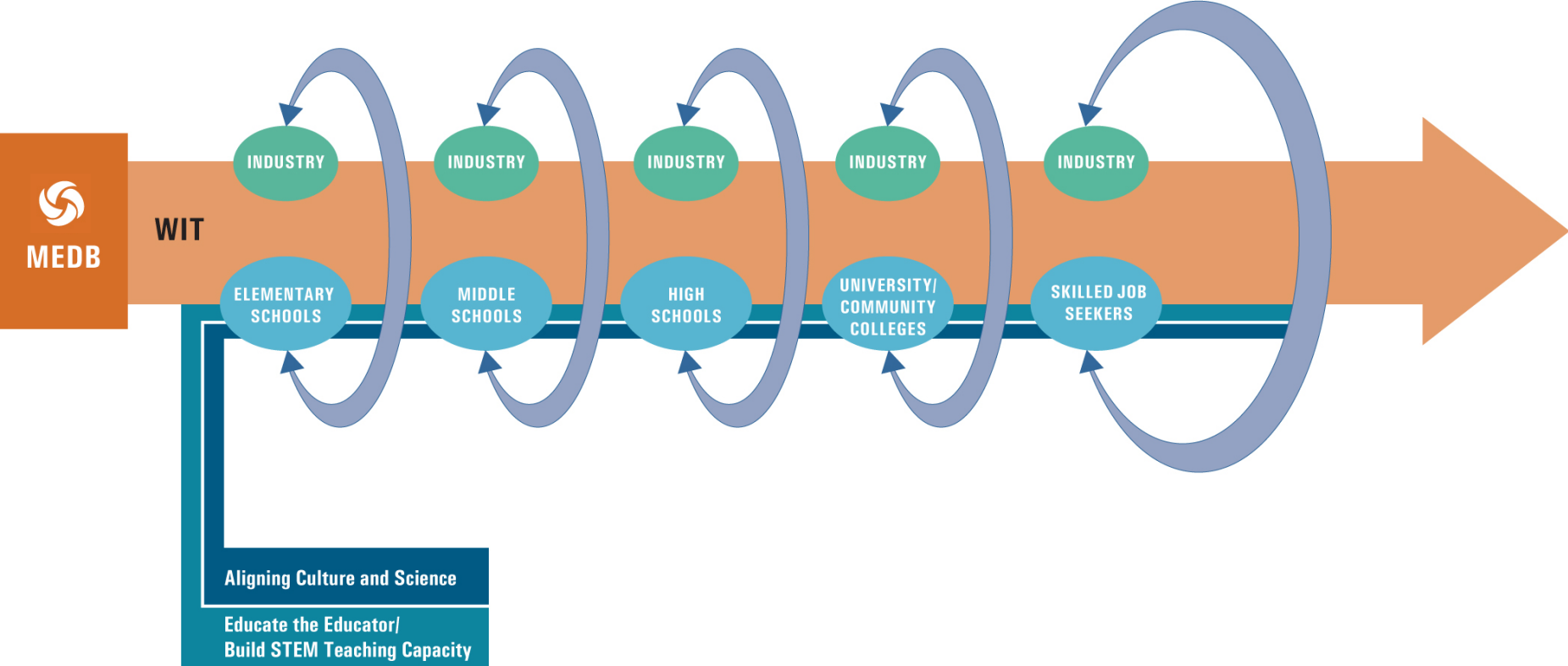
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MEDB
Ke Alahele
Education Fund



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

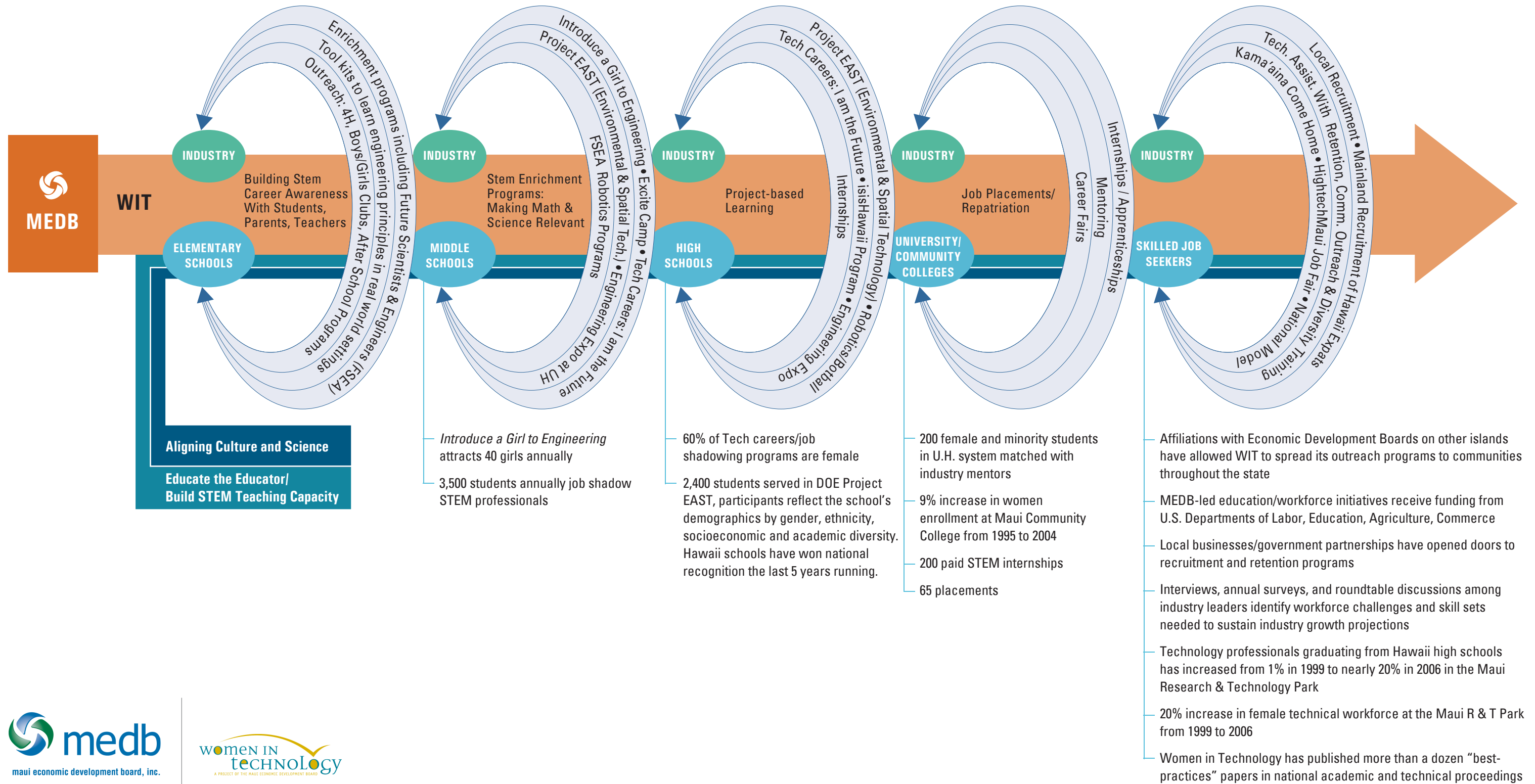
- Over 3,400 students served
- Student Tracking
 - Evaluations administered annually
 - Career Intent
 - **over 76%** showed increased interest in STEM due to Project EAST
 - **71%** plan to pursue a STEM related degree
- Self esteem increases significantly

- 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
 (808) 875-2300 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. 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:

Expense Items	Unit	Subtotal	Request
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
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	\$	\$	\$
	\$	\$	\$
EXPENSE TOTAL	\$	\$	\$

Funding Sources	Subtotal	Pending	Secured
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)	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
	\$	\$	\$
FUNDING TOTAL	\$	\$	\$

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
AVERAGE		188	50%	294	46%	415	51%	475	45%	493	45%	412	32%	2277	42%	

*NH - Native Hawaiian Participants



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 (4th, 6th, 8th 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