



# Sector Strategies & Career Pathways Update

April 25, 2022

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Chamber of Commerce Hawaii

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SMS Research

# Today's Update

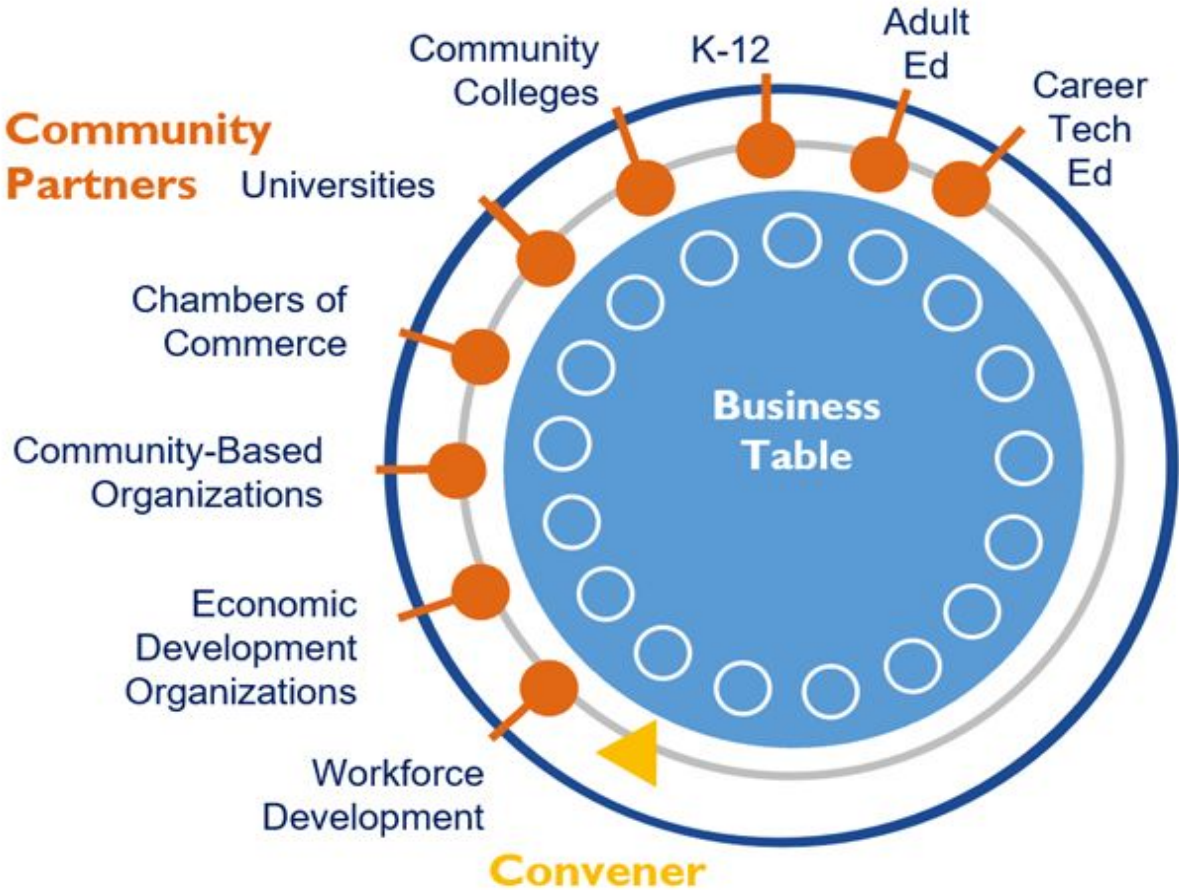
1. Expansion of Sector Partnerships
2. Engineering Sector Partnership
3. Healthcare Sector Partnership
4. IT Sector Partnership
5. Ship Repair Sector

# Sector Partnership Overview

**Industry-driven** public/private collaboratives that address Hawaii's workforce development opportunities.

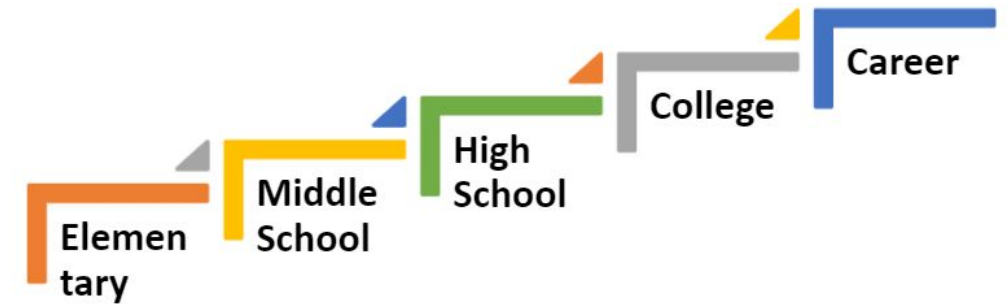
**Support partners** leverage their resources to help.

Third-party **convener** facilitates (grant funded).



# SP 2.0: K to Career Pathway Projects

- ✓ Building a streamlined, connected talent pipeline aimed at improving student preparedness for in-demand and emerging industries
- ✓ Employers support HIDOE Career Academies with a sequence of work-based learning (WBL) aimed at exposing students to the world of work



## Engineering

- Launched February 2021
- 73 engineering firms
- Campbell, Castle, Waipahu Complex



## IT

- Launching April 2022
- IT Workforce Needs Analysis serves as launchpad



## Healthcare

- Active since 2017
- Launching K-Career Pathway project in May 2022
- Farrington, Kapolei, Pearl City, Waianae Complex



## Ship Repair (Welding)

- In development w/ Hawaii Defense Alliance
- Focused on DoD contractors, welding

# Convening & Funding Through the Years

## 2017 – 2020

- Convened by UH and Chamber of Commerce Hawaii
- Funded by Strada Education Network and Harold KL Castle Foundation



## 2021

- Convened by Chamber + Workforce Development Council
- Funded by Workforce Development Council
- Convening support provided by SMS Research



## 2022 (Jan - Jun)

- DLIR returns as co-convenor w/ support from SMS Research



## 2022/23 (Jul - June)

- Kamehameha Schools providing funding support
- DLIR funding continues (??)
- Good Jobs Challenge federal grant application submitted with UH (further expansion)



Kamehameha Schools





# Engineering Partnership Update

# Engineering Sector Partnership

## **Industry:**

AECOM  
Agor Jehn Architects  
Akinaka & Associates, Ltd.  
Architects Hawaii Ltd.  
Army Corps.  
ASCE  
ATA Hawai'i  
Austin, Tsutsumi & Associates, Inc.  
BAYER  
Bechtel  
Belt Collins Hawai'i  
Bills Engineering, Inc.  
Booz Allen Hamilton  
Bowers + Kubota Consulting, Inc  
Burns & McDonnell Engineering Company  
Carollo Engineers  
Coffman Engineers, Inc.  
Community Planning & Engineering  
Consulting Structural Hawaii, Inc.  
Dept. of Environmental Services  
Dept. of Planning and Permitting  
Dept. of Transportation  
ECS Inc.  
Electech Hawaii, Inc.  
Ferraro Choi  
Fukunaga & Associates, Inc.  
G70  
Geolabs  
Gray, Hong, Nojima  
Hawaii Board of Water Supply

Hawaii Unified  
Hawaiian Dredging Construction  
Hawaiian Electric Co.  
HDR Engineering, Inc.  
Healy Tibbits Builders Inc.  
Hi.arch.y LLP  
InSynergy Engineering, Inc.  
Jacobs Engineering  
JCK Underground  
KAI Hawaii  
KCS Consulting, LLC  
Kennedy Jenks  
Layton Construction Co  
Limtiaco Consulting Group  
Lowney Architecture  
Makaha Learning Center  
Martin Defense Group  
Mason Architects, Inc.  
Michael Young  
Miyashiro & Associates, Inc  
MK Engineers, Ltd.  
MKE Associates, LLC  
Nagamine Okawa Engineers, Inc.  
Nakamura, Oyama & Associates  
NAVFAC  
Nordic PCL  
Notkin Hawaii, Inc.  
Obayashi Design Group Inc  
Oceanit  
Okahara & Associates, Inc  
Orion Engineers

OTIS  
Pacific American Foundation  
Pacific Geotechnical Engineers, Inc.  
Park Engineering  
QRSE, LLC  
R.M. Towill Corp.  
RIM Architects, LLC  
Ronald N.S. Ho & Associates, Inc  
Sam O. Hirota, Inc.  
Sato & Associates  
Shigemura, Lau, Sakanashi, Higuchi & Associates  
SPAWAR Systems Center Pacific  
SSFM International  
Structural Hawaii, Inc.  
Tanimura & Associates, Inc. (i3ngineering)  
Thermal Engineering Corp.  
Wilson Okamoto Corp.  
WSP Parsons Brinkerhoff  
Yogi Kwong Engineers

## **Secondary Education:**

Campbell Complex  
Castle Complex  
Waipahu Complex  
Hawai'i State CTE  
Kamehameha Schools

## **Post-Secondary Education:**

Song Choi, UH College of Engineering  
Dr. Brennon Morioka, Dean, UH College of Engineering  
Leeward Community College

## **Community Partners**

Harold KL Castle Foundation  
Hawai'i P-20  
Kauai Economic Development Board  
Maui Economic Development Board  
Workforce Development Council

## **Conveners:**

Keala Peters, Chamber of Commerce Hawai'i  
Katie Kaahanui, Chamber of Commerce Hawai'i  
Lord Ryan Lizardo, Chamber of Commerce Hawai'i  
Faith Rex, SMS Research  
Anna Pacheco, SMS Research



# ENGINEERING SP FOCUS: Build a K to Career Engineering Pathway

## Engineering Talent Pipeline



**Pilot School Complexes: Campbell, Castle & Waipahu**



# Engineering: 4 Shared Priorities

*Our discovery phase has yielded these shared priorities among our three school complexes (Waipahu, Campbell, Castle):*

1

**Career Awareness and Interest**

Exposure to various career paths within the STEM/Engineering industries, with awareness opportunities for students and parents beginning at the elementary-school level

2

**Increasing STEM Interest among Female Students**

Developing a sequence of opportunities for girls to gain exposure to STEM and engineering careers. Native Hawaiian students will also be a focus for this workgroup.

3

**Ensuring students are Math-Ready**

Exposing students to the math requirements needed to stay on track while in the K-12 pipeline, to be able to meet university engineering requirements and expectations

4

**Recruiting Advisory Board Members**

Convening industry and education partners to serve on an advisory board tasked with streamlining and strengthening WBL efforts within the school complex

Internships, Project-Based Learning (PBL) and Educator PD will be foundational elements across the first three priorities.



# Outcomes and Objectives

1. Improved technical and professional **skillset** among local engineering students.
2. Increased **supply** of local engineers in Hawaii.
3. Enhanced engineering program **infrastructure** in pilot school complexes.
4. Increased student **engagement** in engineering career options.
5. Increased **alignment** between secondary and post-secondary programs and careers.

# Engineering Dashboard

## Program Indicators

Total number of engineering pathway graduates

113

Percent of Engineering Pathway Students that are Female

8%

Total number of calculus completers

110

Total number of graduating seniors enrolling at UHCOE

30

## Work Based Learning Indicators

Businesses onboard into ClimbHI

68

Educators onboard into ClimbHI

598

WBL opportunities available

153

WBL Experiences to date

4

Students Impacted

315

# 2021-22 School Year Highlights

- Engineers Week
  - Engineering Field Day
  - Virtual Parent Night
  - UH Job Fair
  - Mock Job Interviews
- Female Engineers Speakers Bureau
- ClimbHI Bridge
- Engineering Expedition Downtown Field Trip
- STEMworks Summer Engineering Internships
- Math Curriculum Mapping
- Career Awareness Presentation and Resource Sheets
- Engineering Educator Resource Bank

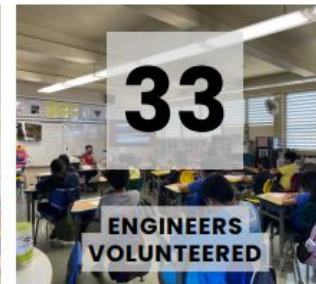


# ENGINEERS WEEK 2022

## Impact Report

The Chamber of Commerce Hawaii's Engineering Sector Partnership introduced Engineers Week from February 22 to 25 to Hawaii students in grades K-12. Engineers Week offered multiple events that exposed students to STEM activities and helped build Hawaii's future engineering talent pipeline. Events included an Engineering Field Day, a UH College of Engineering Virtual Career and Job Fair, Virtual Parent/Guardian Night, Introduced a Girl to Engineering event and Mock Job Interviews.

**"I WANT TO BE AN ENGINEER WHEN I GROW UP!"  
- WAIPAHA ELEMENTARY STUDENT**

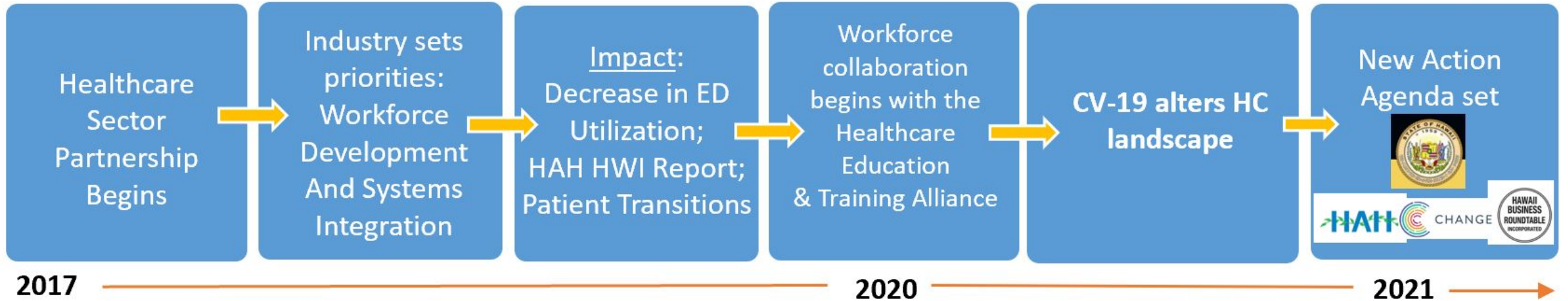


**"ALL ENGINEERING AND HANDS ON CLASSES SHOULD STRIVE TO BE LIKE THE ENGINEERING FIELD DAY. THIS WAS A FUN AND CHALLENGING ACTIVITY THAT ALLOWED STUDENTS TO TRULY GET CREATIVE AND PRACTICE USING REAL WORLD SKILLS."  
- JAMES CAMPBELL HIGH SCHOOL STUDENT**

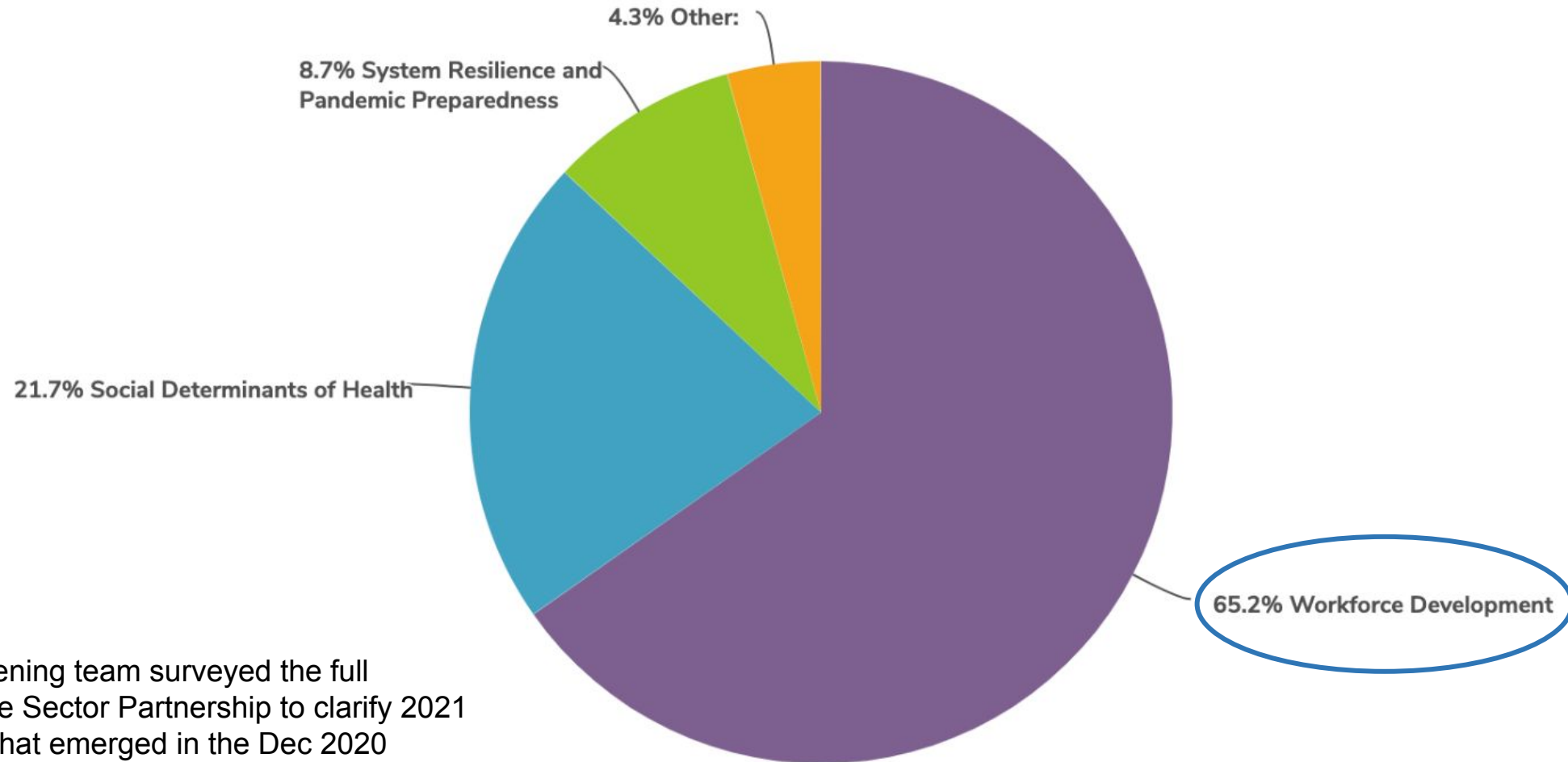


# Healthcare Partnership Update

# What we've accomplished so far:



# 2021 Workforce Development Focus

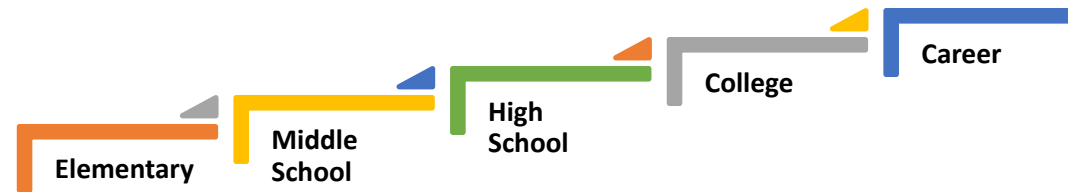


The convening team surveyed the full Healthcare Sector Partnership to clarify 2021 priorities that emerged in the Dec 2020 meeting. A clear majority of respondents felt the partnership should focus on supporting workforce development efforts.



# Developing a Healthcare K to Career Pathway Project

This project will be a collaborative effort between education and industry partners to build Hawaii's future healthcare workforce through sequences of connected experiences that support career awareness, exploration, preparation and training over time.



## Vision

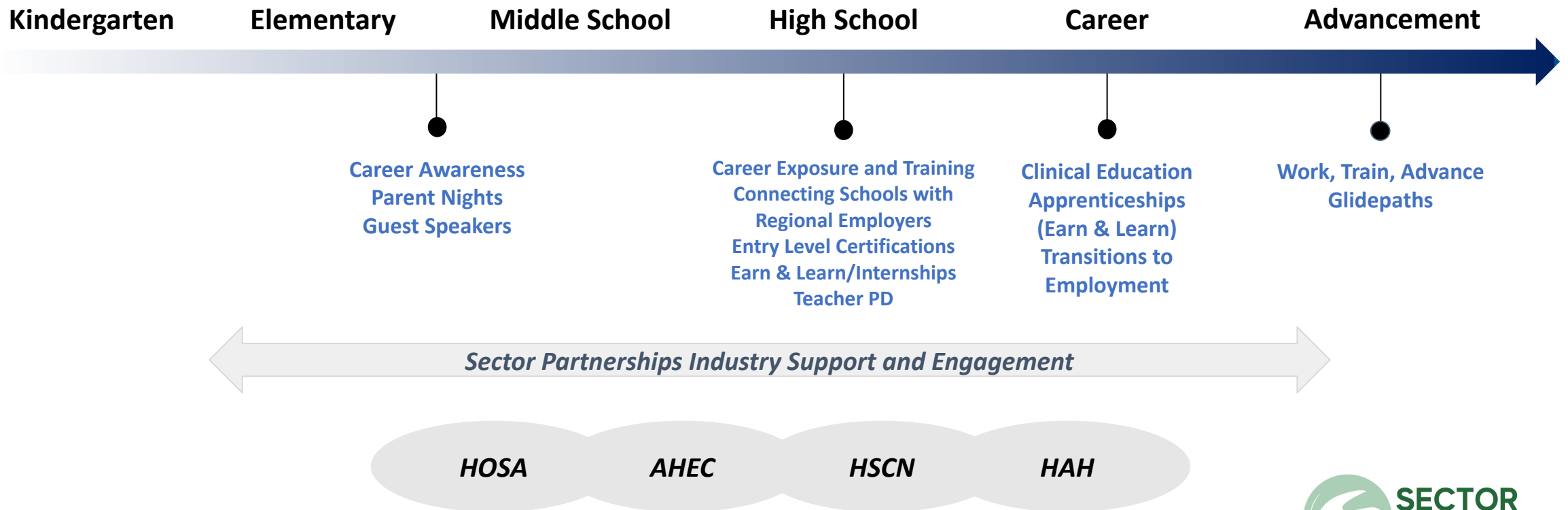
Through industry and education collaboration, build a connected cradle-to-career healthcare talent pipeline that allows us to attract, develop, and retain Hawaii's healthcare workforce of tomorrow.

## Guiding Principle

Work-Based Learning (WBL) will be a foundational element. We will seek to build a sequence of activities that follow the P-20 WBL Continuum, build technical and employability skills as students progress, provide on the job training, and connect students with future employers.

# Developing a Healthcare K to Career Pathway Model

*Working in partnership with leaders in our healthcare community, our task is to develop a cohesive model that aligns and expands statewide efforts in healthcare workforce development to include impactful career exposure, technical career preparation, and support through to employment and career advancement.*

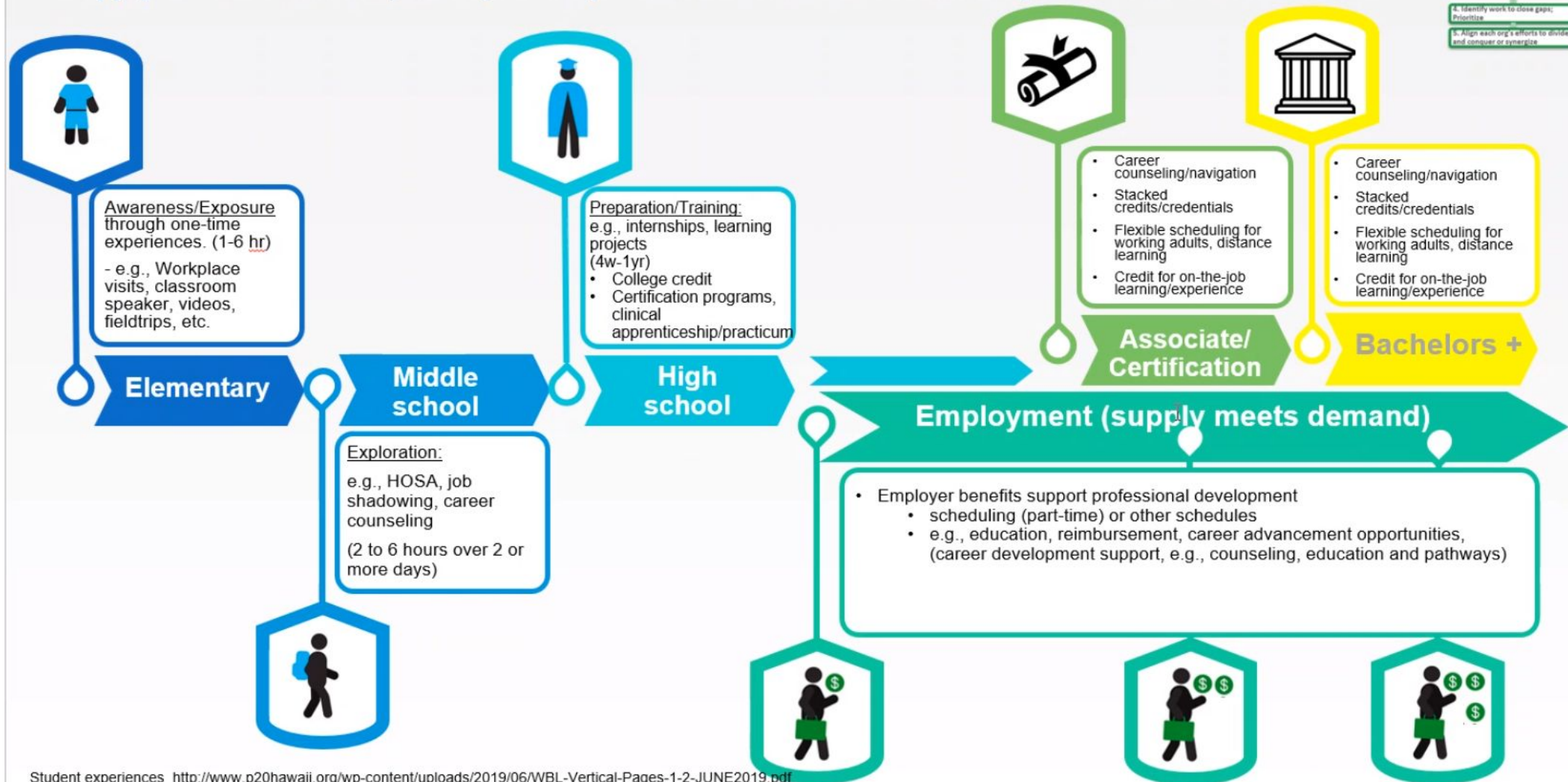


# Healthcare Pathway Project

## Step 2: Painting A Future Picture (Desired End State):

Supply meets Demand; Glidepath: Optimize Advancement Pathways to Attract and Retain

1. Current state
2. Paint the end-state picture
3. Gap Analysis:
4. Identify work to close gaps; Prioritize
5. Align each org's efforts to divide and conquer or synergize



# Healthcare Pathway Project

## Complex Selection Criteria

1. **Career Academy School** with demonstrated infrastructure and teacher/administrator buy-in.
2. **Number of Healthcare Programs of Study (POS)** or 4-year sequence offered.
3. High percentage of high school **students enrolled** in CTE Health POS.
4. **Established HOSA** high school chapter (bonus points for middle school chapter)
5. **Other supports** (WBL intermediary, industry partners, post-secondary education partners, etc.).

**New Partners:** Farrington, Kapolei, Pearl City, Waianae



# Healthcare Pathway Project

## *Emerging Shared Priorities*

### Career Awareness/WBL

Increased opportunities for students to learn about career opportunities in healthcare. (Workplace visits, classroom speakers, job fairs, career counseling, etc.)



### Earn & Learn/OJT

Expanding opportunities for students to gain work experience and training. (Internships, certifications, college credit, and clinical education slots, etc)



### Curriculum Support

Increasing industry guidance and training opportunities for teachers across all healthcare pathways of study to support educators and allow for expanded course offerings.

### Emerging Shared Priorities

Based on initial planning, we consider the above to be included in the key initiatives to be taken on by the pathway project.



**IT Sector**

# Hawaii IT Workforce Needs Report - Nov '21

## IT Sector in 2020

**12,740**

Jobs

**894**

Ave. Annual  
openings

**157%**

Ave. hourly wage vs  
ALICE Individual

**30%**

Churn within the  
Industry

**3,834**

New Hires

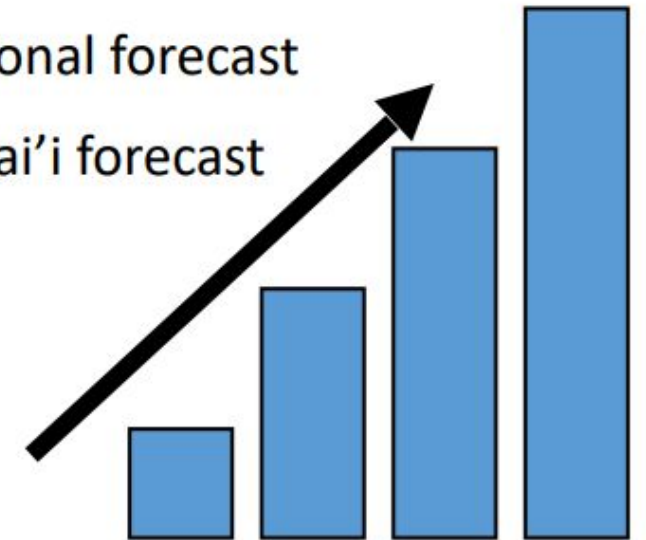
**\$2+ Billion**

Industry contribution  
to Hawai'i GDP

## By 2030

**13%** National forecast

**7%** Hawai'i forecast



# IT Workforce Analysis Recommendations

1. Align educators and employers – improve partnership between IT employers and educational institutions to better match skills students gain with needs of employers – for both today and the future.
2. Increase career awareness – involve industry partners in career awareness work-based learning so students and parents understand at an early age the opportunities and skills/credentials needed by occupation.
3. Increase training opportunities – engage industry to provide on-the-job training such as internships and apprenticeships. OJT enhances professional skills and helps students apply technical skills to the real world.
4. Review minimum qualifications for entry-level jobs – review employers' screening criteria for entry-level positions. Give credit for skills gained through credential attainment, OJT and work experience.
5. Improve data collection – data collection enables better program evaluation.



# ITSP Governance



**Conveners:** This team is the administrative and fiscal engine that supports the Partnership.

- Chamber of Commerce
- DLIR (SMS Research)
- University of Hawaii
- Kamehameha Schools

**Project Team:** This core group leads planning and strategy setting for the Partnership (meets monthly).

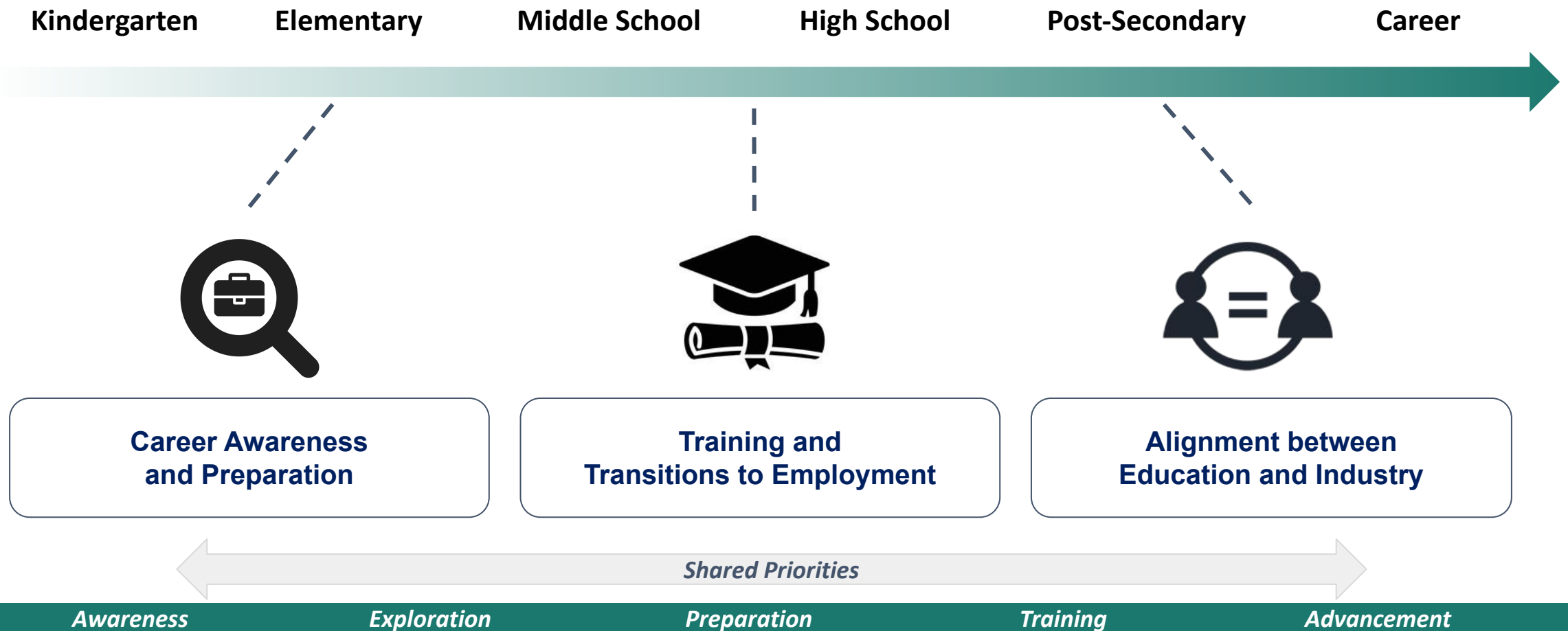
- |                        |                                      |
|------------------------|--------------------------------------|
| ● Chamber of Commerce  | Keala Peters                         |
| ● SMS Research         | Anna Pacheco                         |
| ● University of Hawaii | Tammi Chun, Alan Ito,<br>Keala Chock |
| ● Hawaii P20           | Warren Kawano                        |
| ● HTDC/TRUE            | Leilani Farinas                      |
| ● HKLCF                | Alex Harris                          |
| ● Paxca                | Jean Schneider                       |
| ● KS                   | Nalani Kealaiki                      |

**Steering Committee:** This group of public facing champions helps guide agenda setting and leads priority workgroups for the Partnership (meets quarterly).

- |                       |   |
|-----------------------|---|
| ● IT Employers        | Kelly Ueoka, Eddie Ontai, Elden Ito,<br>Deena Tearney, Karen Yamamoto |
| ● Healthcare Employer | Steve Robertson   |
| ● Banking Employer    | Ryan Field  |
| ● Defense Employer    | Ed Barnabas   |
| ● STEMworks           | Leslie Wilkins  |
| ● HTDC                | Len Higashi   |
| ● HDA                 | Jen Sabas   |
| ● CIO Council         | Greg Hester   |
| ● CyberHI             | Jodi Ito  |
| ● UH                  | Garret Yoshimi  |

# Developing an IT Career Pathway

*Vision: for every IT job in Hawaii there is a qualified local candidate.*



# Workgroup Initiatives

Emerging and in progress key initiatives for each of the priority workgroups include:



## Career Awareness and Preparation

- *Work-based learning*
- *IT for Everyone*
- *ClimbHI Bridge*
- *CIO Brochure*
- *Employability Skills*
- *K to 12 Internships*
- ***TBD by Workgroup***



## Training and Transitions to Employment

- *Career Fairs*
- *Internships*
- *Training Programs*
- *IT Job Boards*
- *(Employment/Internships)*
- *Networking Events*
- *Increase Student Equity and Access*
- ***TBD by Workgroup***



## Alignment between Education and Industry

- *Career Pathway Mapping*
- *Curriculum Mapping*
- ***TBD by Workgroup***

# IT Sector Partnership Rollout

Late February	Mid-March	Mid-March	April 26	Late April	May/June/July	August
<p><b>Steering Committee Invitations</b></p> <p>Personal invitations to potential steering committee members.</p>	<p><b>Steering Committee Meeting</b></p> <p>Meet with steering committee to present plan for full partnership meeting and receive survey/agenda approval.</p>	<p><b>Full Partnership Survey and Meeting Invite</b></p> <p>Email full partnership list with priority initiatives survey and invitation to full partnership meeting in April.</p>	<p><b>Full Partnership Meeting</b></p> <p>First Full Sector Partnership Meeting to review Partnership framework and set action agenda.</p>	<p><b>Establish Action Agenda for Priority Initiatives</b></p> <p>Finalize action agenda for priority initiatives with workgroup leads.</p>	<p><b>Priority Workgroup Meetings and Initiative Work</b></p> <p>Workgroups will advance priority initiatives and hold meetings as needed.</p>	<p><b>Full Partnership Meeting</b></p> <p>Full Sector Partnership will reconvene to share initiative progress and results.</p>



# Ship Repair Sector

# HI Defense Alliance: Ship Repair Workforce

- Defense spending = \$7b;  
102,000 jobs
- HI Defense Alliance  
(DBEDT) focusing on  
workforce
- Sector Partnerships  
supporting



PHNSY Visit for Campbell HS April 12



Mahalo for your  
partnership!

