

Learn Live [^] Work , Play

A regional strategy for workforce readiness and economic development

A plan to provide living wage and tech jobs to students upon graduation
in their community

School Complex Career Pathways

In spite of multiple and various efforts to improve student learning in Hawaii, the results have been varied and fractured. Industries and education are not aligned to produce workforce-ready graduates, resulting in graduates leaving Hawaii in search of better opportunities and employers outsourcing a large percentage of their workforce that should be dedicated to local employees.

The School Complex Career Pathways initiative is a holistic approach helping to engage and inspire our students with the effort concentrated within the school complex. In addition to “growing” a skilled local workforce, this initiative hopes to open the doors to the myriad possibilities that show our children that through a “good education” they can achieve their dreams. Whether they choose to remain at home or to move abroad, they will have the training and skills to live wherever they choose.

This template could be utilized for each regional school complex that can create or identify a local industry.

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WHY?

Problem → Solution
(no alignment)



WHO?

Partnerships
Organization (chart)

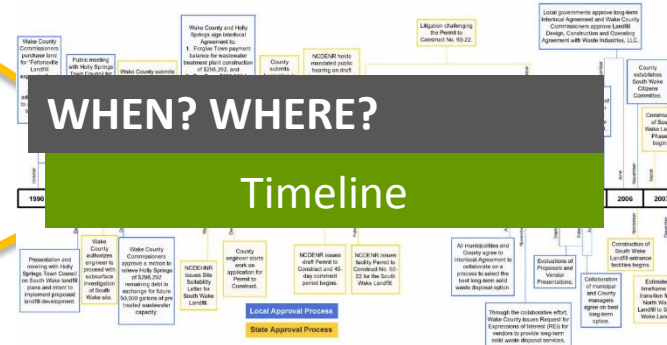
WHAT? HOW?

Program



WHEN? WHERE?

Timeline



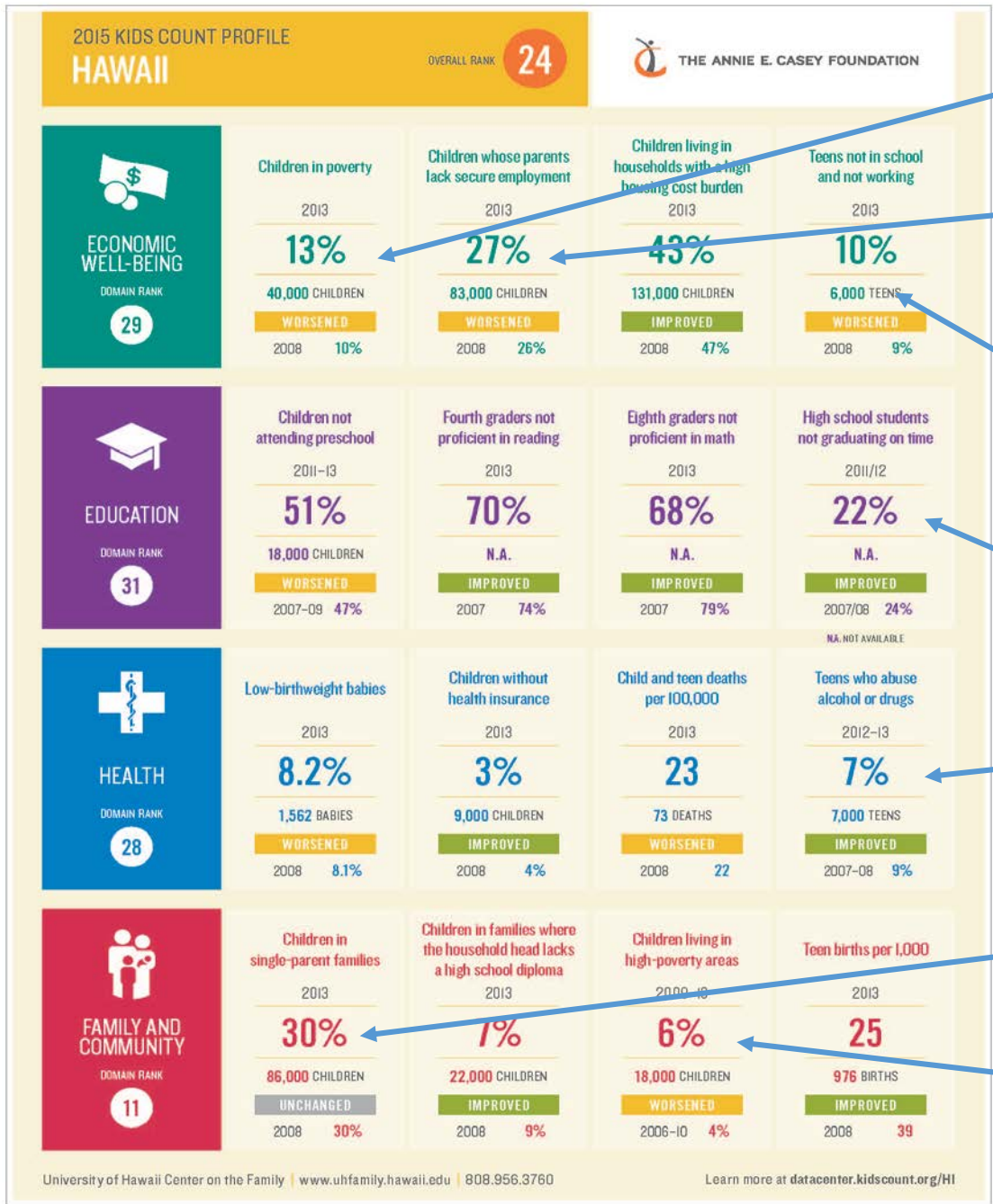
HOW MUCH?

What we need from you.
What we need from partners.



1. Demonstrated Needs

Justify the demonstrated needs through community trends



Children in poverty: 13%

Children whose parents lack secure employment: 27%

Teens not in school/working: 10%

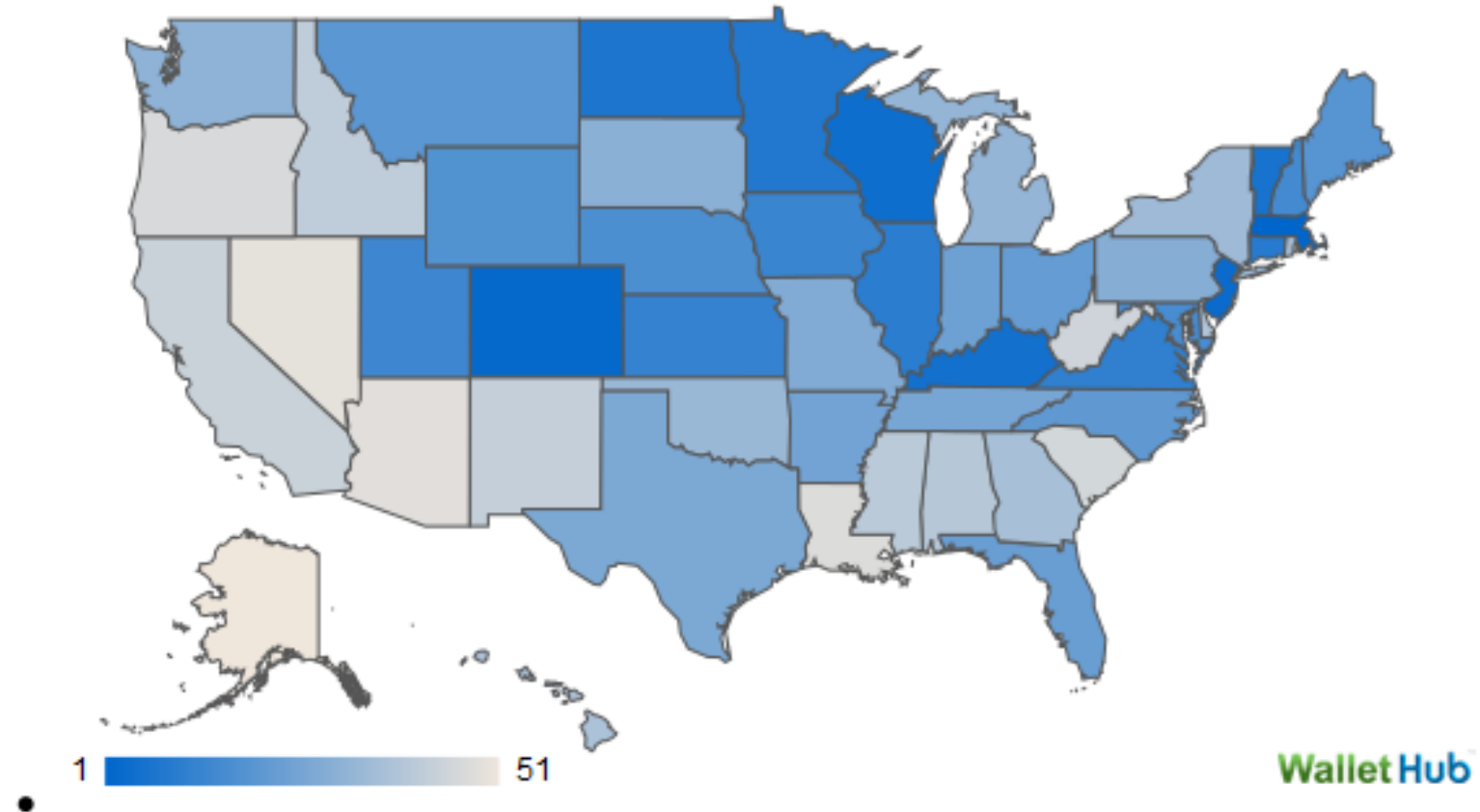
High school graduates not graduating on time: 22%

Teens who abuse alcohol/drugs: 7%

Single-parent families: 30%

Children living in high poverty areas: 6%

Ranking School Systems

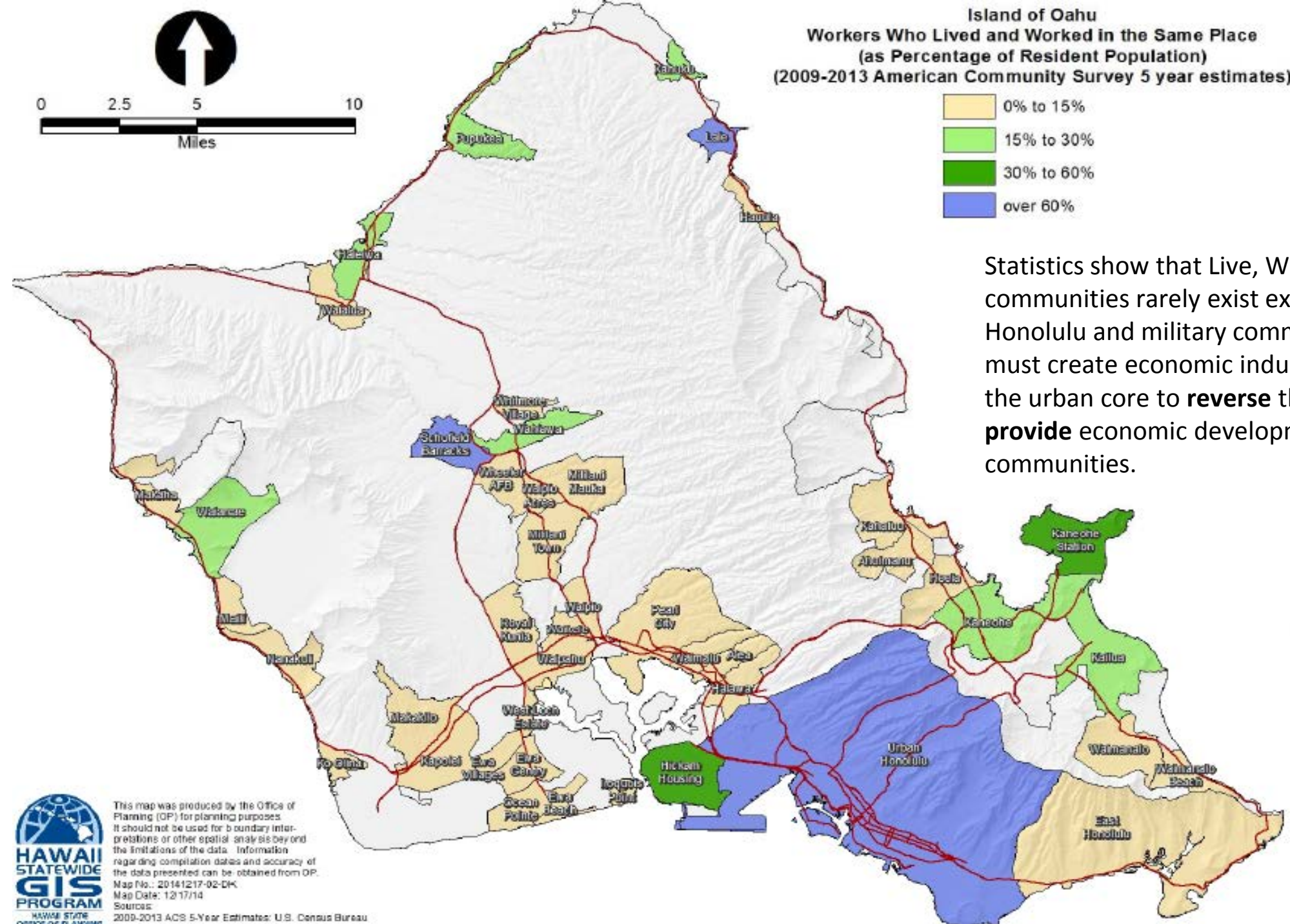
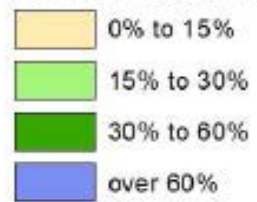


Source: [WalletHub](https://www.wallethub.com)

A recent study found that Hawaii ranks **37th** overall in education systems despite ranking **17th** in spending.



Island of Oahu
Workers Who Lived and Worked in the Same Place
(as Percentage of Resident Population)
(2009-2013 American Community Survey 5 year estimates)



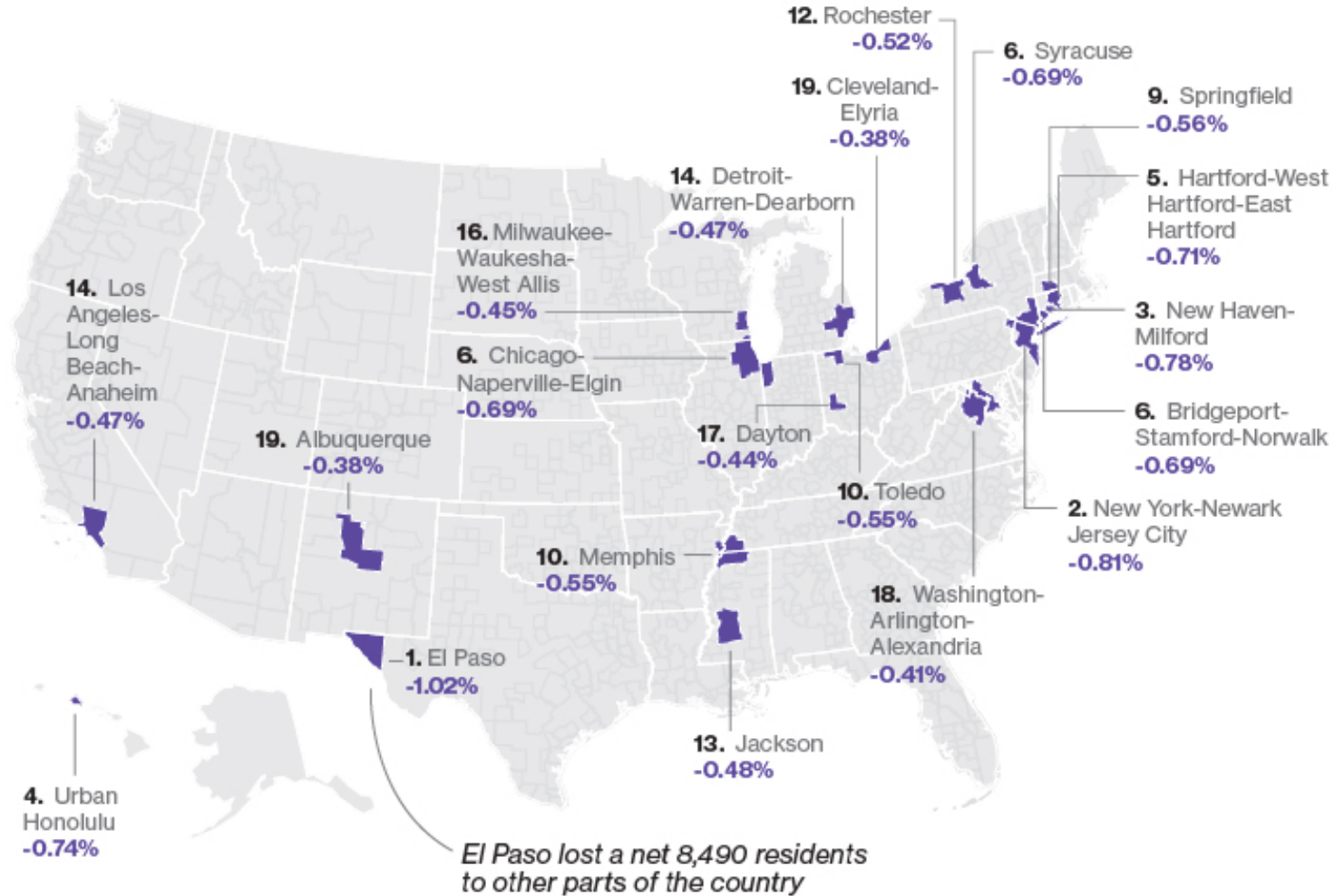
Statistics show that Live, Work, Play communities rarely exist except in Urban Honolulu and military communities. Hawaii must create economic industries outside of the urban core to **reverse** the brain drain, **provide** economic development, and **sustain** communities.



This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
 Map No.: 20141217-02-DK
 Map Date: 12/17/14
 Sources:
 2009-2013 ACS 5-Year Estimates; U.S. Census Bureau

The Cities Americans Are Ditching

Of the 100 most populous metro areas in the U.S., these 20 lost the highest share of their residents to other parts of the country.



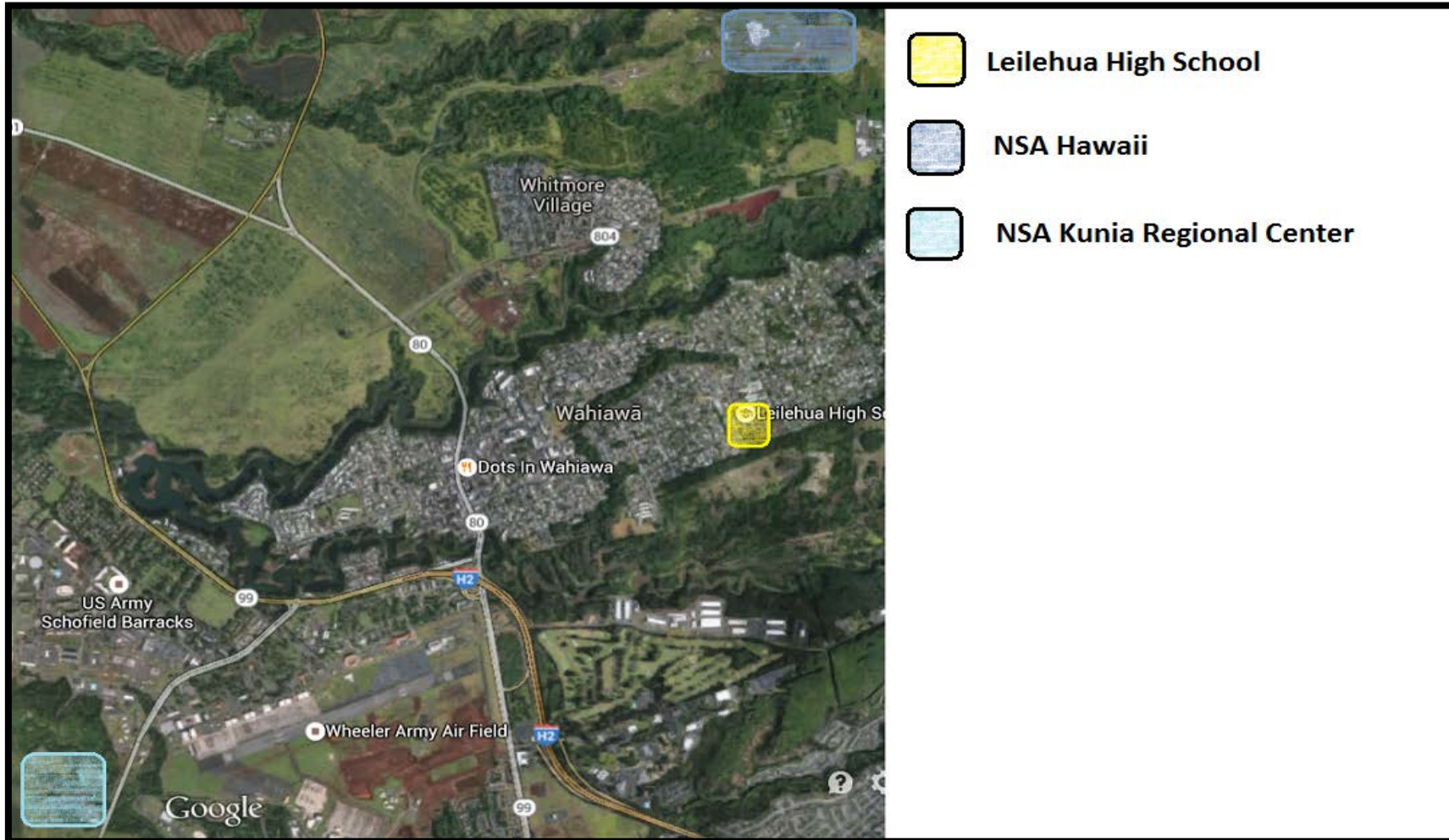
Source: Bloomberg analysis of U.S. Census data

2. Identify or Create.

Identify or create industry in region that encompasses a high school and feeder schools.

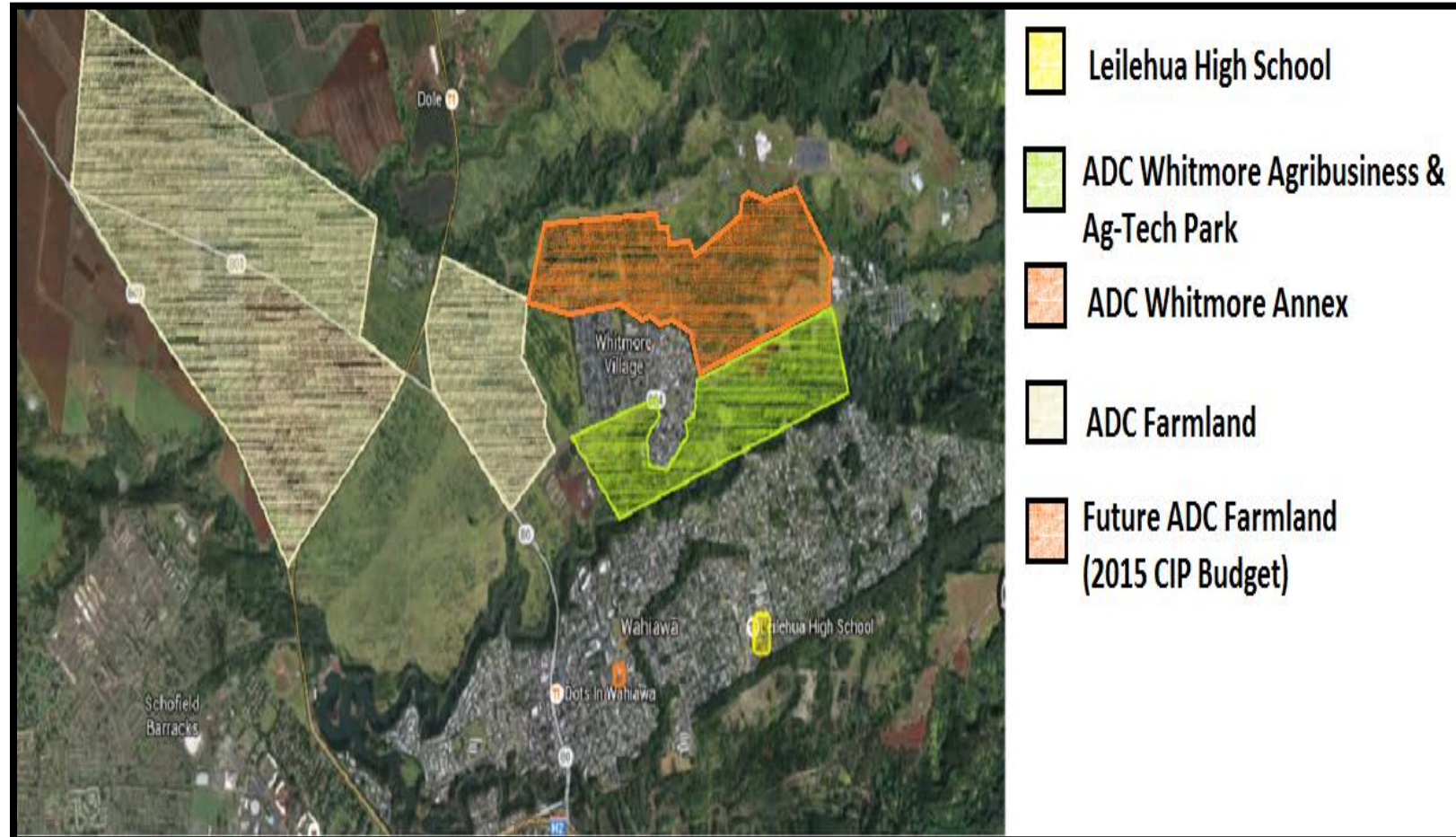
Leilehua Complex

National Security Agency Hawaii



Identifying the industry within a region:
Leilehua Complex has identified the National Security Agency (NSA) as a career pathway.

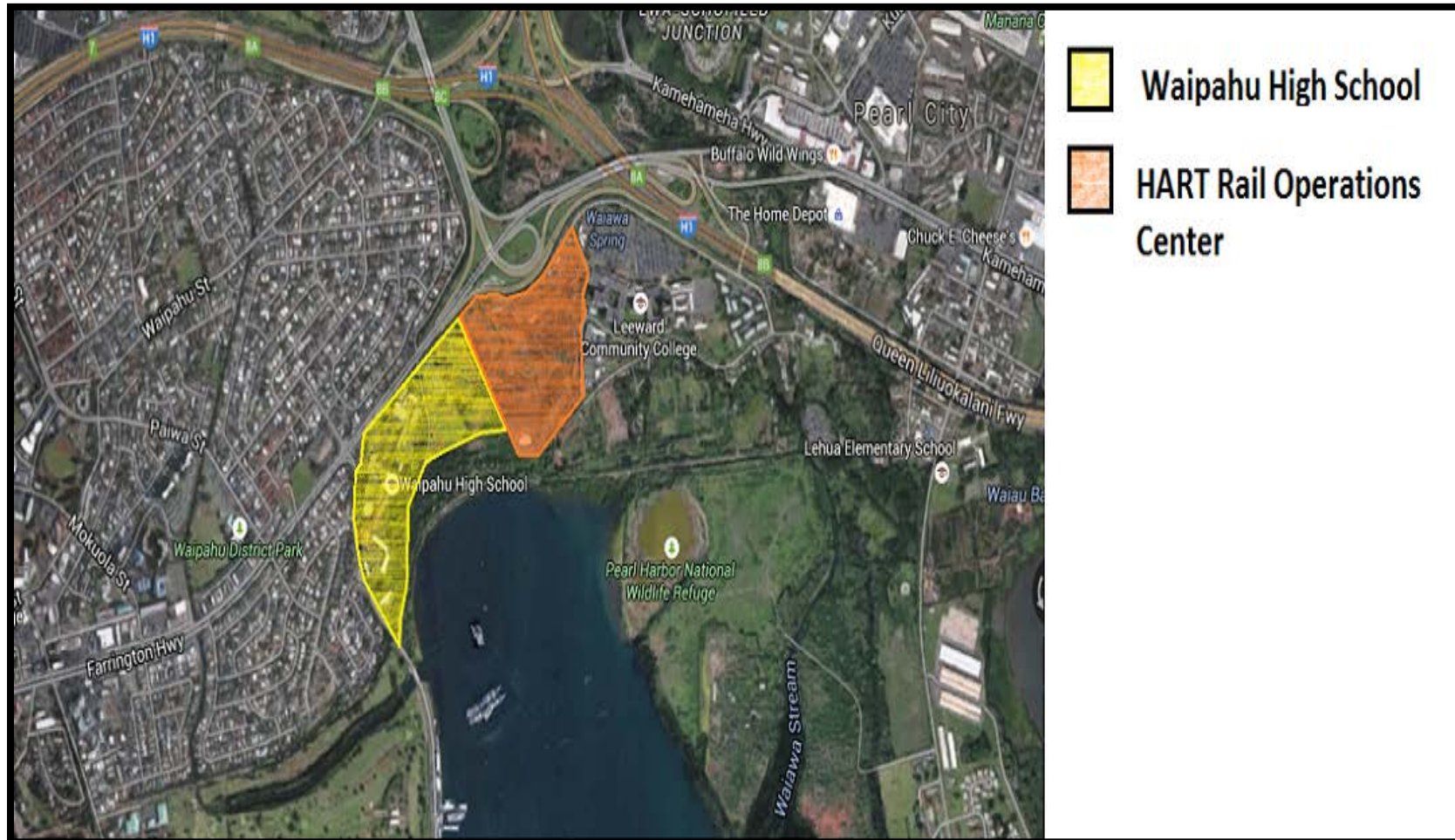
Leilehua Complex Whitmore Project



Creating the industry within a region:
Leilehua Complex will create the
Whitmore Project as an agribusiness
and ag-tech career pathway.

Waipahu Complex

HART Rail Operations Center



Identifying the industry within a region: Waipahu Complex has identified the Honolulu Authority for Rapid Transportation (HART) as a career pathway.

Waipahu Complex

QMC West Oahu



Identifying the industry within a region: Waipahu Complex has identified the Queens Medical Center – West Oahu (QMC) as a career pathway.

3. Engage.

Engage leaders and discuss employer needs and industry requirements for employment.

Silos to Synergy

- The engagement of diverse backgrounds will break administrative silos
- Government, industry, and education must be aligned to ensure Hawaii's graduates have viable opportunities
- Assess, Create, and Identify industries and schools to produce a live, learn, work, play community



Hawaii Coffee Co.



- Relocating factory to Mililani Technology Park
- Short 50 skilled employees (fabrication, processing, tech-Savvy)
- Teamsters Local 996 job opportunities
- Outsourcing of employment
- Partner with DOE to provide students with workforce training
- No alignment for educational curriculum and industry needs
- High value certification
- Post-secondary education not needed



"Waipahu High has become the pipeline between the student clientele and the industry. We strive to have our students ready for careers."

- Keith Hayashi
Waipahu High School, Principal

Program Awareness

Previous Presentation Attendees

Edu. Institution

- Dept. of Education
- Leilehua High School
- Leilehua Alumni & Community Association
- Waipahu High School
- Office of Naval Research
- University of Hawaii
- Chaminade University
- Hawaii Public Charter Schools Network

Industry

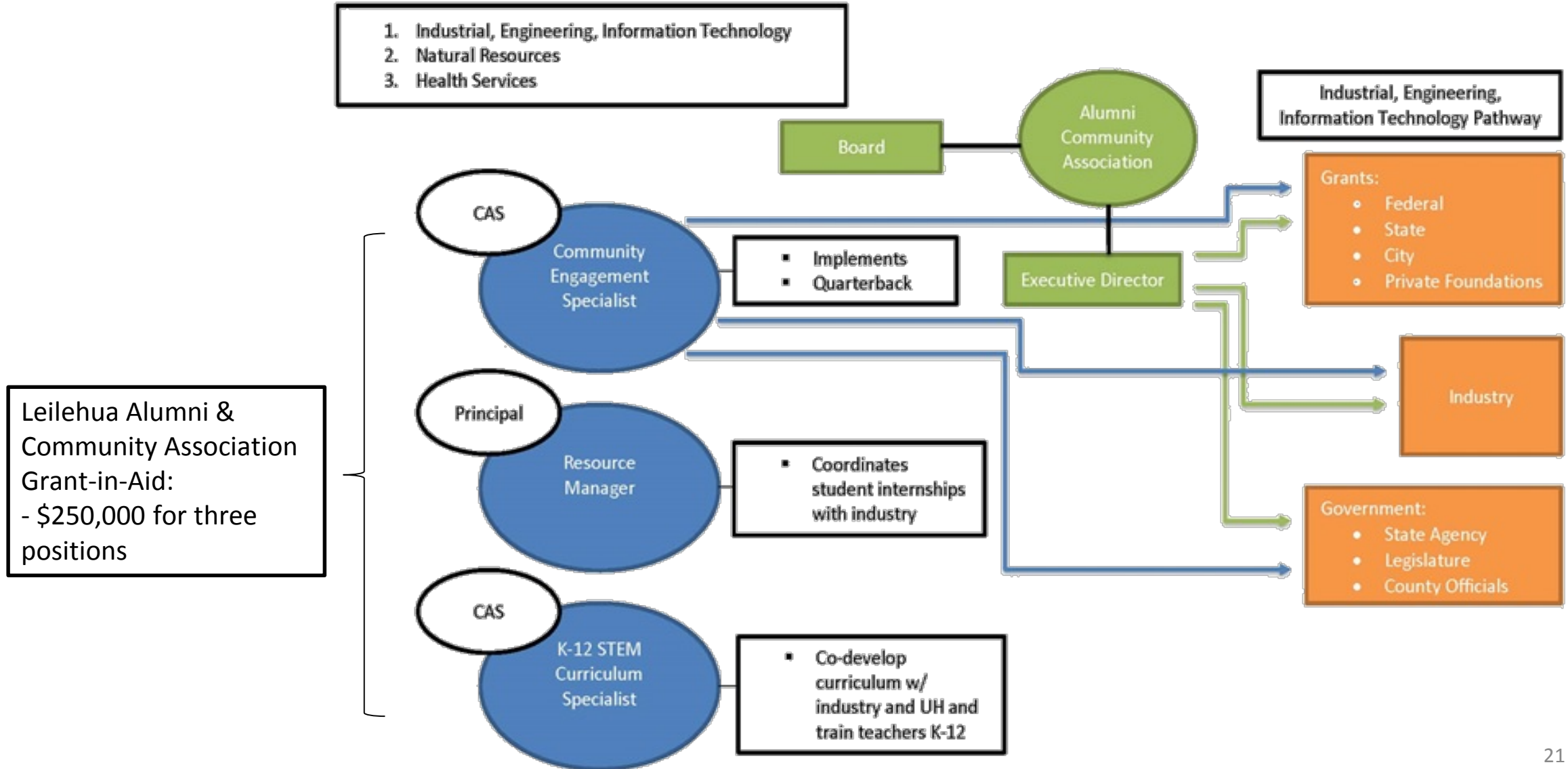
- National Security Agency
- Whitmore Project
- HART
- Queen's West

4. Assess

Assess capacity at school complex

Internal Capacity

Necessary Administrative Infrastructure



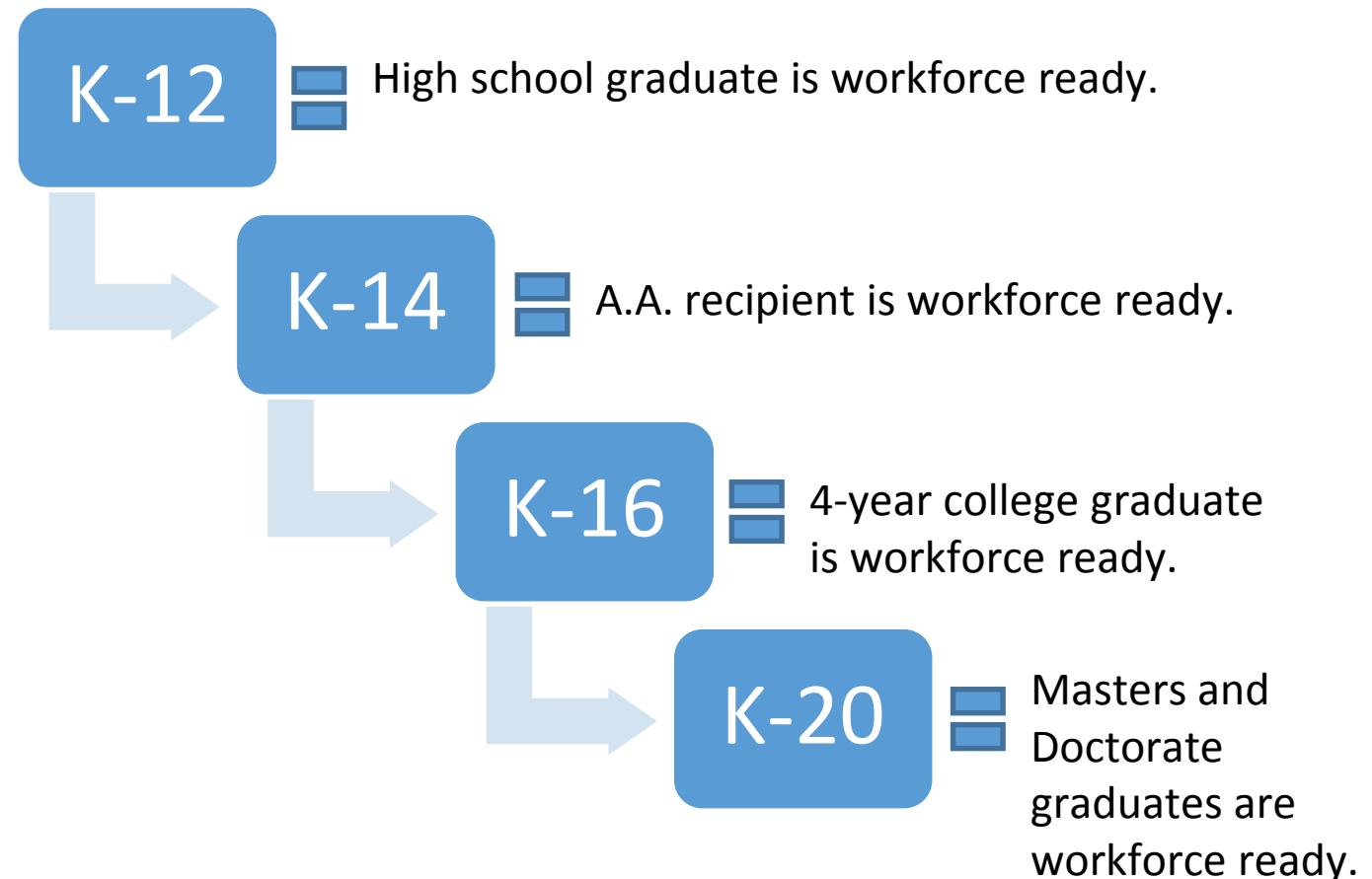
5. Develop & Align.

Develop precise alignment to workforce readiness.

Ensuring a job upon high school graduation, continuing on to higher education

Currently curriculum not aligned for NSA careers.

- Computer Science
- Computer/Electrical Engineering
- Mathematics
- Foreign Language
- Intelligence Analysis
- Cryptanalysis/Signals Analysis
- Information Assurance
- Installation & Logistics
- Business
- Security



Complex Curriculum Alignment Strategy

K → 5th Grade

- ❑ Hands on investigations for self interest
- ❑ Personal judgments and decision making
- ❑ Collaboration & team work-systematic problem solving (design process)

6th → 8th Grade

- ❑ Design process problem solving (design process)
- ❑ Project based learning tied to the community
- ❑ Self application to real world problems
- ❑ Collaboration with leadership roles

9th → 12th Grade

- ❑ Student driven problem solving (design process)
- ❑ Project based learning using evaluation techniques
- ❑ Self innovation in designing solutions to real world problems
- ❑ Complex learning in a collaborative setting

Curriculum must meet industry needs in math, science, technology, foreign language, and communications.

Partnering to ensure resources/staffing

Co-teaching and internship opportunities



NSA Programs

- STARTALK Language Program
- STEM Education Partnership Program (MEPP)
- Cryptokids
- Partners in Education Program

Hawaii 3 – 6

- Dedicated funding for K-12 out-of-school programs and internships
- Cyber defense clubs, foreign language clubs

Dual Credit & Jump Start

Dual Credit Program

Statewide program between the University of Hawaii and the Dept. of Education that provides an opportunity for academically qualified high school students to enroll in college classes through the UH system as part of their high school coursework.

- Available to grades 9 – 12
- Scholarship opportunities for low-income students
- Guarantees both high school and college credits

Jump Start Program

Partnership between GEAR UP, the University of Hawai'i (UH) and the Department of Education (DOE) to provide qualified seniors early access to vocational/technical education opportunities on a college campus. Students take coursework that fulfills requirements for a two-year college degree as well as their high school diploma.

- Establishes a ready workforce
- Provides options for students who want to enter the workforce

6. Plan.

Develop school campus facilities plan to reflect pathway focus.

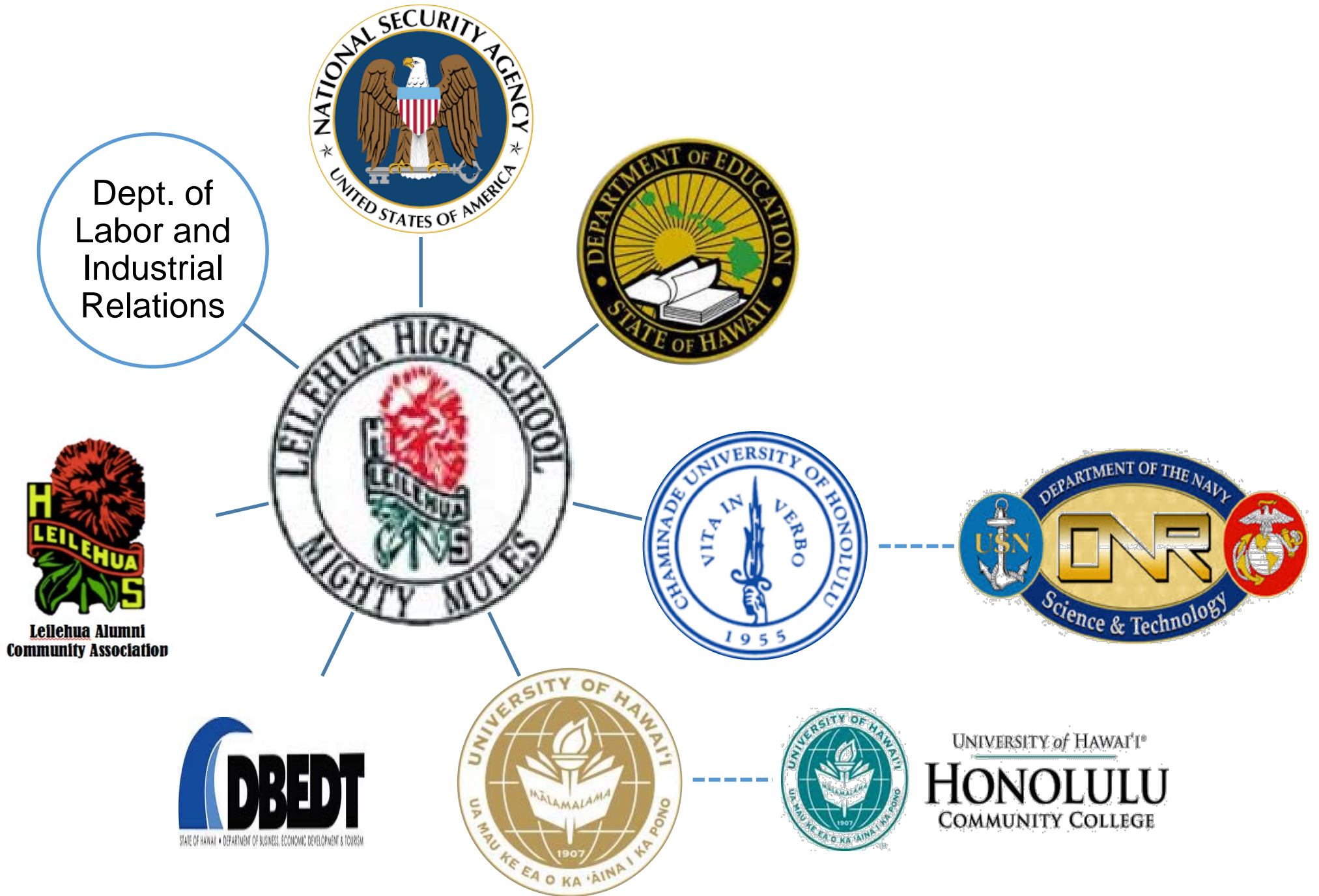
Facilities that ensure pathway support and precise alignment

- Identify industry needs
- Simulate existing and future workplaces
- Masterplan schools based on the academy focus
- Identify funding options and partnerships



7. Identify.

Leilehua High Partners: NSA; Whitmore Project; First Responder's Technology Park;
Pacific Institute on Technology & Aging



Wahiawa's economic history

Pineapple industry once allowed residents to live and work in their community:

- Dole once farmed 7,000 of pineapple in Central Oahu
- Dole significantly reduces operation in Whitmore Village
- Dole downsized farming to 2,700 acres

U.S. Census (2010)

- Median household income: \$50,592
- Persons below poverty level: 13.9%
- College completion rate: 16.1%



Curriculum Non-Alignment

DOE Languages

CHINESE

Filipino

French

German

Japanese

KOREAN

Latin

RUSSIAN

Spanish

Leilehua Language Electives

German

Japanese

Spanish

NSA Foreign Languages

Arabic

CHINESE

KOREAN

Persian Farsi

RUSSIAN

NSA's foreign languages should be the basis of all foreign language courses offered at Leilehua. The current electives do not reflect the surrounding industry.

Timeline to develop pathway

Phase I Short Term

June – December 2015

June: Meet with legislators

July: Establish Standing Working
Group Committee

July: Gov release funds for LACA

July: Assign tasks, benchmarks,
deadlines

July - December: Finalize course
curriculum for Curriculum Brochure

Phase II Mid Term

January – July 2016

January: Students select courses for
School Year 2016

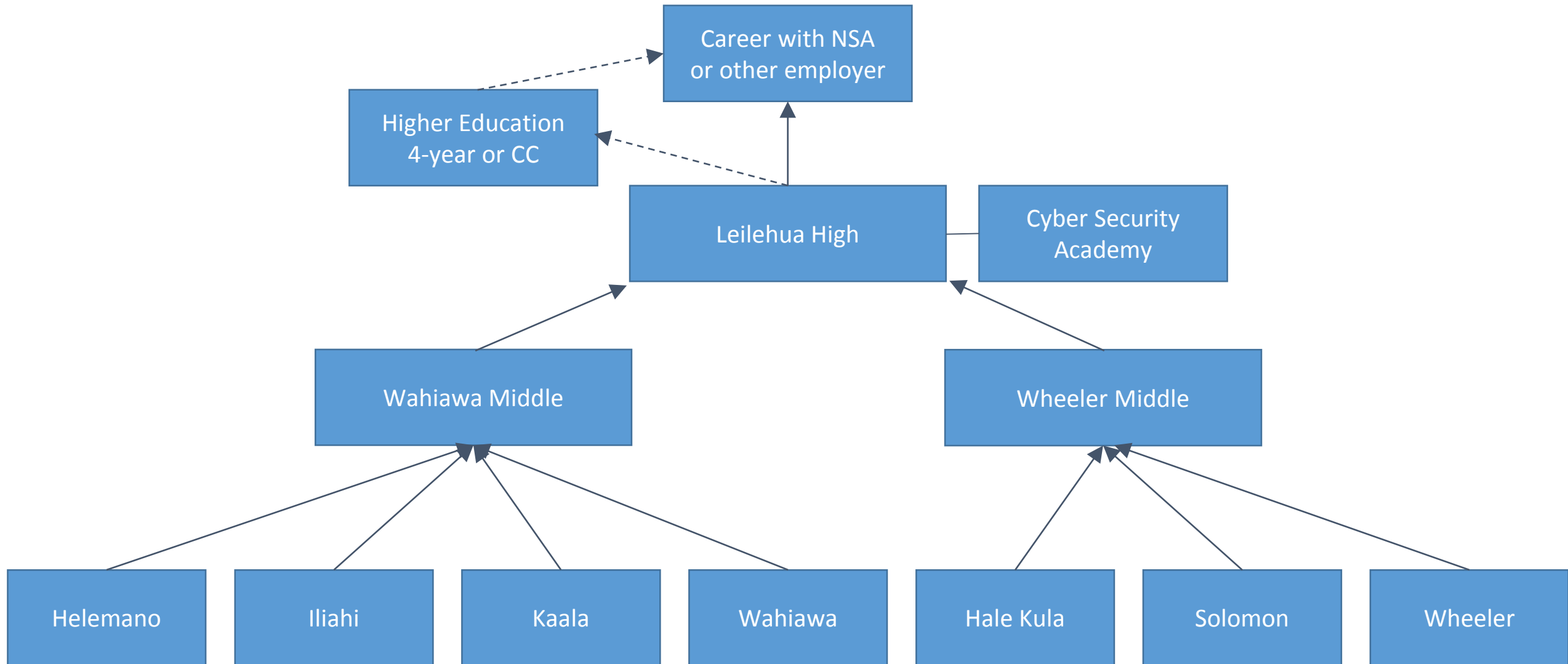
July 1: QTR begins – Students
Grades 9 – 12 actively engaged and
studying curriculum

Phase III Long Term

July - 2016+

Align curriculum for K – 5th Grade /
6th – 8th Grade

Cyber Security Pathway, K-12



NSA Programs

Programs	Pivot K - 12	Pivot K - 14	Pivot K - 16	Pivot K - 20
Computer Science, Engineering and Mathematics		✓	✓	✓
High School Programs	✓			
Internship Programs			✓	✓
Stokes Educational Scholarship	✓			
Cooperative Education Program		✓	✓	✓

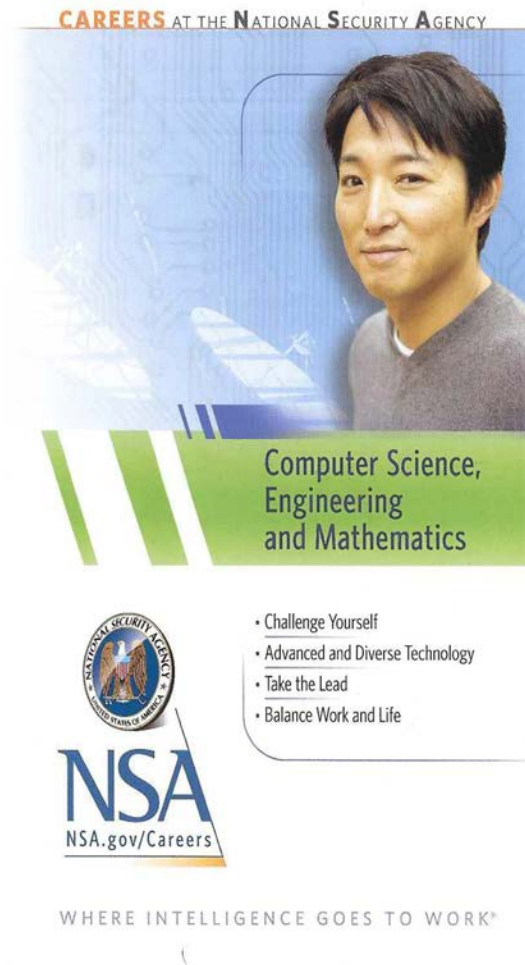
***80%** of NSA program participants return for **permanent employment** after college graduation, the other **20%** are **recruited** by other intelligence and defense agencies (i.e. Dept. of Homeland Security, FBI).

- High School Interns GS-2 Security Clearance
- College Interns GS-6 Security Clearance

Computer Science, Engineering and Mathematics


Opportunities:

- Computer Science
- Computer/Electrical Engineering
- Mathematics
- Technical Skills
- Information Assurance
- Signals Analysis
- Cryptanalysis
- Collection
- Development Programs



CAREERS AT THE NATIONAL SECURITY AGENCY

Computer Science,
Engineering
and Mathematics


NSA
NSA.gov/Careers

- Challenge Yourself
- Advanced and Diverse Technology
- Take the Lead
- Balance Work and Life

WHERE INTELLIGENCE GOES TO WORK®

The graphic features a portrait of a man against a blue background with circuit patterns. Below the portrait is a green banner with the text 'Computer Science, Engineering and Mathematics'. To the left of the banner are three diagonal stripes (green, white, green). Below the banner is the NSA seal and logo, followed by a list of benefits and the slogan 'WHERE INTELLIGENCE GOES TO WORK®'.

High School Work Program

Available HSWS Positions:

- Office Assistant
- Computer Aide
- Vo-Tech
- Model Shop


CAREERS AT THE NATIONAL SECURITY AGENCY



High School Programs



- Gain Experience
- Challenge Yourself
- Earn a Salary
- Make a Difference



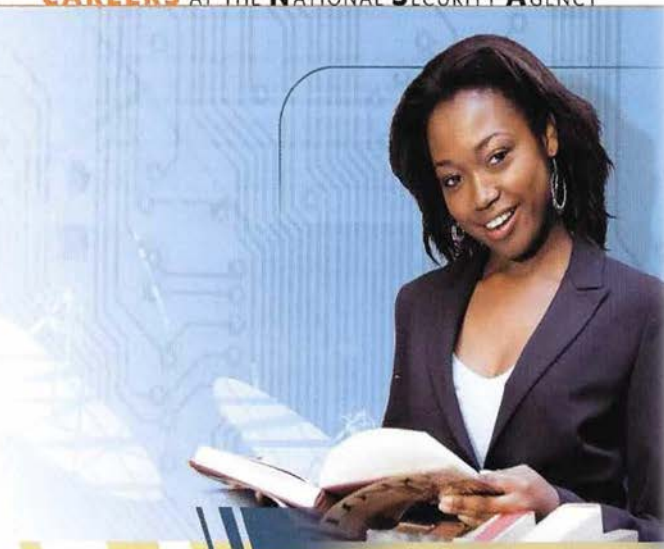
www.NSA.gov/Careers

WHERE INTELLIGENCE GOES TO WORK®


College Internship Programs

- Summer Intern Program for Science and Technology (SIP/ST)
- Director's Summer Program (DSP)
- Cryptologic Access Summer Intern Program (CAP)
- Installation & Logistics (I&L) Intern Program
- Cryptanalysis and Exploitation Services Summer Program (CES/SP)
- Graduate Mathematics Program (GMP)
- Intelligence Analysis Summer Program
- CAE in Cyber Operations Summer Intern Program
Summer Intern Program for Informational Assurance (SIP/IA)
- Computer Science Intern Program (CSIP)
- Summer Language Program
- Summer Program for Operations Research Technology (SPORT)
- Cyber Summer Program (CSP)
- Human Resources (HR) Intern Program
- Occupational Health, Environmental and Safety Services (OHESS) Intern Program

CAREERS AT THE NATIONAL SECURITY AGENCY



Internship Programs



NSA
NSA.gov/Careers

- Gain Experience
- Challenge Yourself
- Earn a Salary
- Make a Difference

WHERE INTELLIGENCE GOES TO WORK®

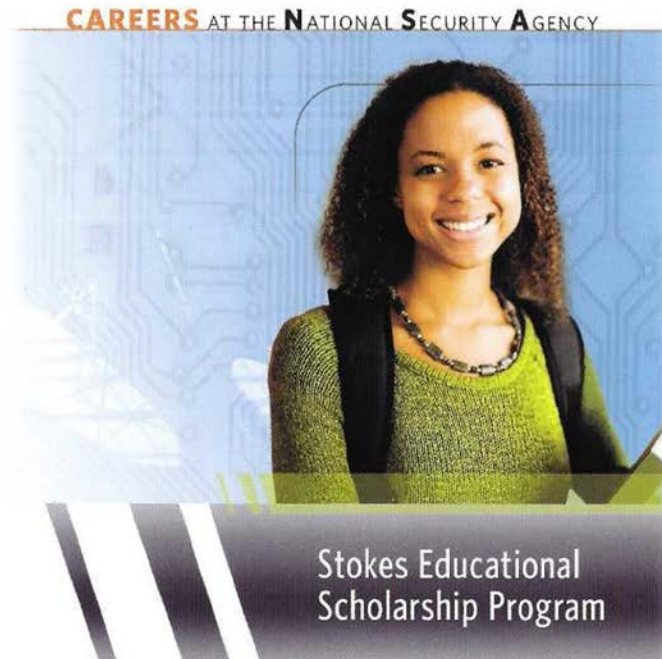
Stokes Educational Program

Qualified Career Fields:

- Computer Science
- Computer or Electrical Engineering
- Geared towards minority students

Benefits

- Paid Tuition up to \$30,000 per year
- Year-round salary
- Agreement to work for NSA for at least one-and-one-half times the length of study upon graduation

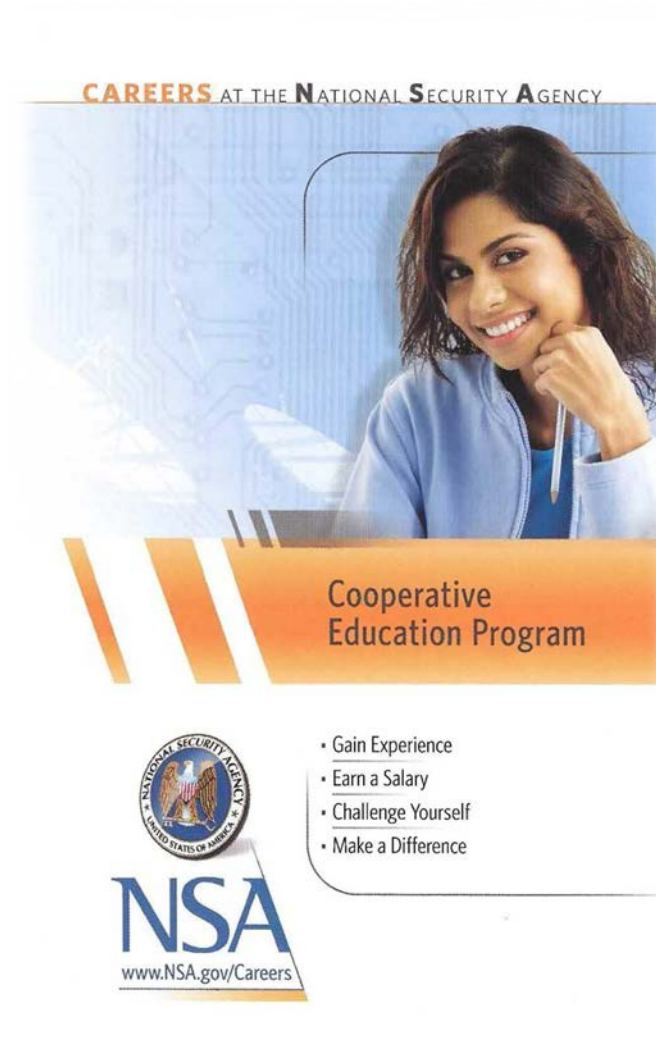


- Paid Tuition up to \$30,000 per Year
- Year-round Salary
- Rewarding Work Experience
- Guaranteed Employment

WHERE INTELLIGENCE GOES TO WORK®

Cooperative Education Program


- Electrical or Computer Engineering Majors
- Computer Science Majors
- Rotational program as full-time employee and full-time student from entry into the program until graduation
 - 52 weeks of co-op work experience
 - 40-hour weeks
- Competitive Salaries determined by the percentage of credits completed toward a degree



CAREERS AT THE NATIONAL SECURITY AGENCY

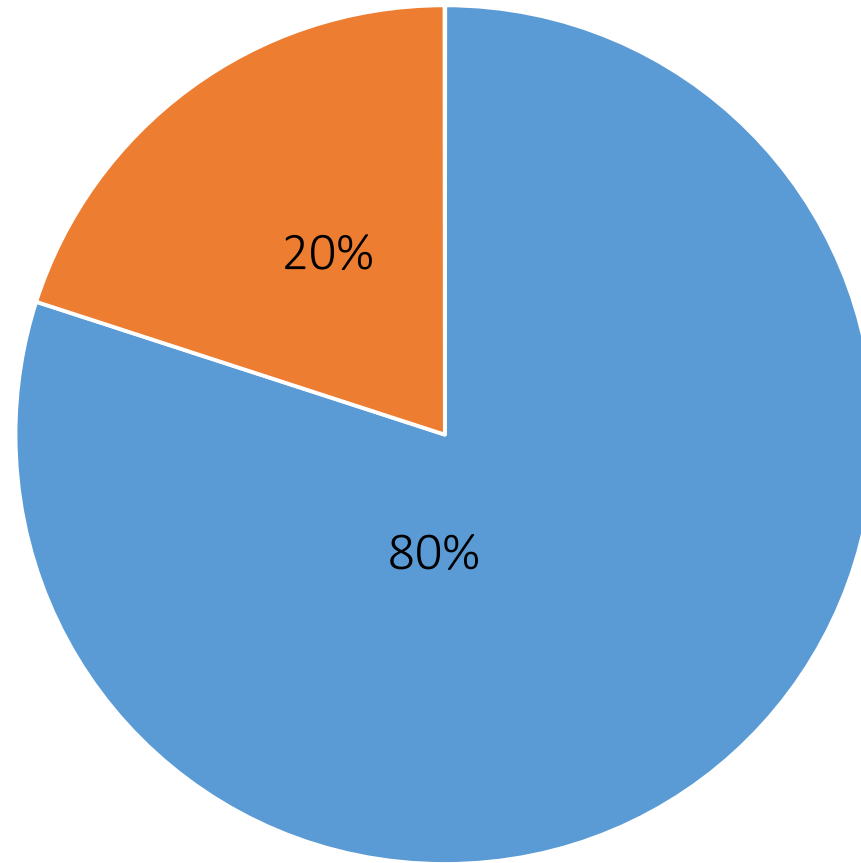
Cooperative Education Program

- Gain Experience
- Earn a Salary
- Challenge Yourself
- Make a Difference


NSA
www.NSA.gov/Careers

WHERE INTELLIGENCE GOES TO WORK®

NSA Hawaii Workforce



■ Military ■ Civilian

NSA Hawaii Employment

NSA Hawaii has recognized that outsourcing workforce results in frequent turnovers. This culture will be changed by recruiting local employees for extended periods.

- 3000 employees
- 80 vacant positions

NSA Hawaii also recruits high school and community college/university interns.

- 13 high school interns
- 24 university interns
- Minimum of 20 hours per week
- Vets 75-100 for high school interns
- Vets 100+ for university interns

Hawaii Business Roundtable & Hawaii State Teachers Association Internships

- 12 teacher internship positions
- 3 to 5 day internships
 - Intelligence community
 - Teachers with education professionals on leadership (DRIVE)
 - Focus on security briefings (including STEM and cryptology)

8. Identify.

Waipahu High School: Honolulu Authority for Rail Transit; Queens Medical-West
Oahu



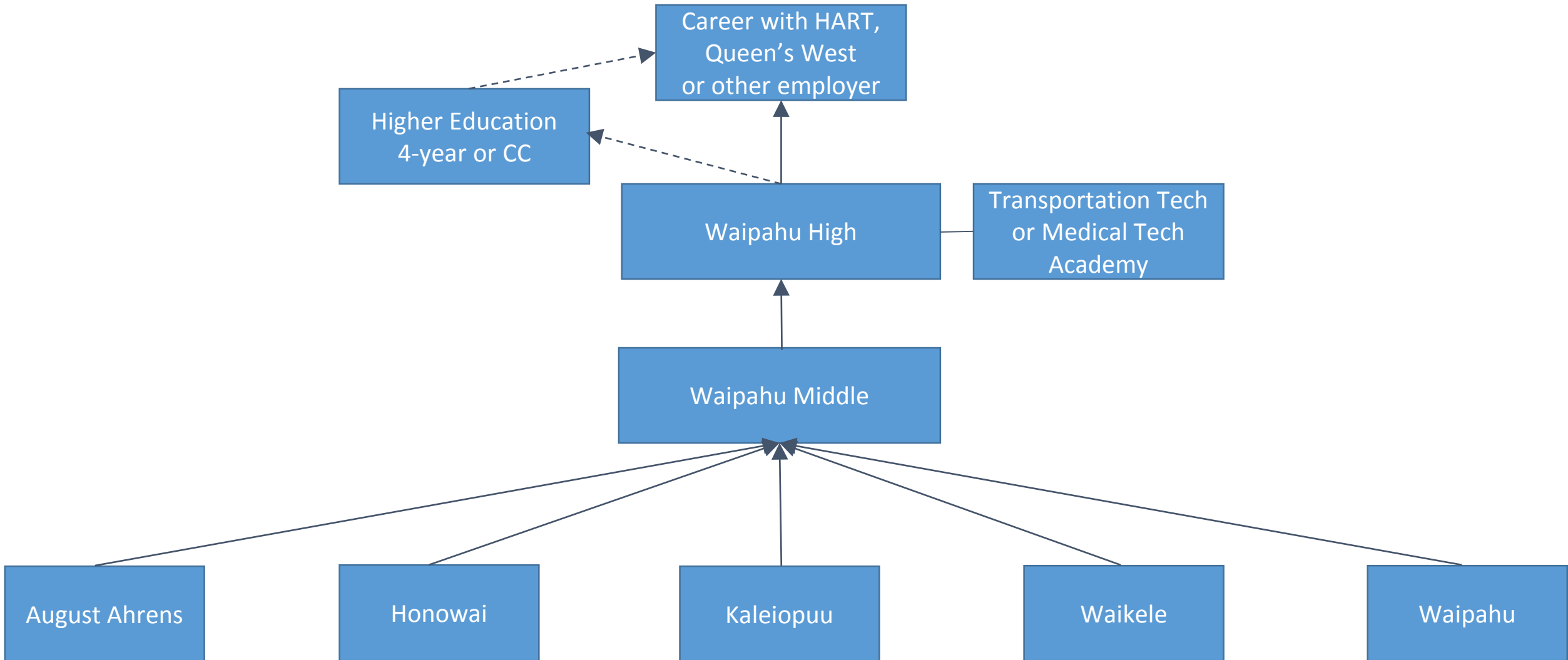
Dept. of Labor and Industrial Relations



UNIVERSITY of HAWAII
LEEWARD
COMMUNITY COLLEGE



Cyber Security Pathway, K-12



HART Rail Operations Center



Transit Services

- Operations & Servicing

Monitor and control all the the rail transit vehicles as they move through the system, stations, and the rail operations and control center

- Maintenance of Way

Inspect and repair the guideway, stations and track

- Train Wash

Operating the train wash facility that will be used to clean the exterior of the rail vehicles

- Wheel Truing

Maintenance of vehicle wheels

Service

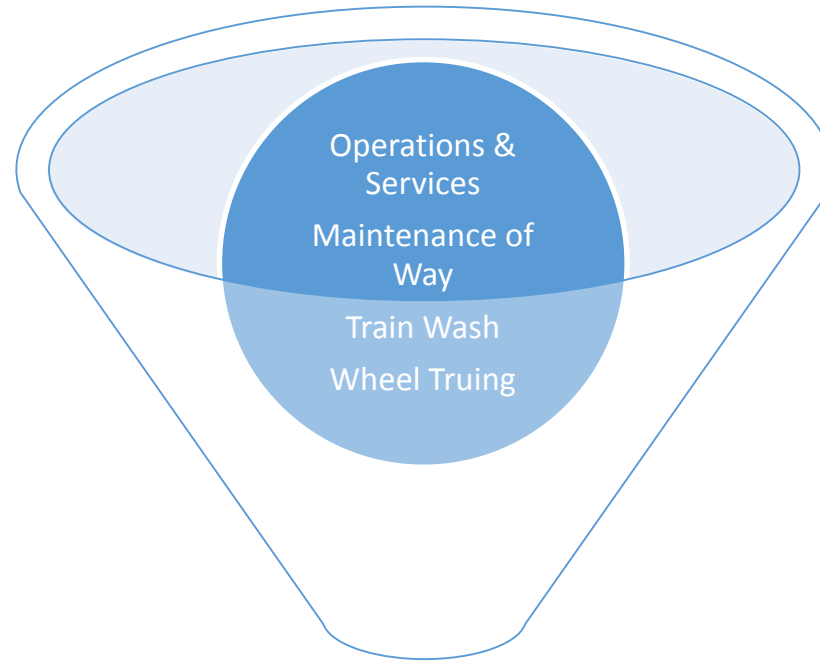
- 80 Railcars
- 40 Miles of Track
- 21 Stations
- East Kapolei to Ala Moana
- Stations w/ Parking
- 4a – 12a Weekdays*
- 6a – 12a Weekends*

Operations

- 300 +/- Employees*
- 12 Departments
 - Safety, Health & Environment
 - Customer Service
 - Operations
 - Maintenance of Way
 - Railcar Maintenance
 - Systems Maintenance
 - Operations
 - Customer Service
 - Information Technology
 - Human Resources
 - Engineering
 - Finance

*"The commitment from Ansaldo Joint Venture is that **99 percent** of the employees that will be working at this site in the future, (and) the **300** or so people who will actually work across the system, will be **local people.**"*

- Dan Grabauskus
HART, Executive Director & CEO



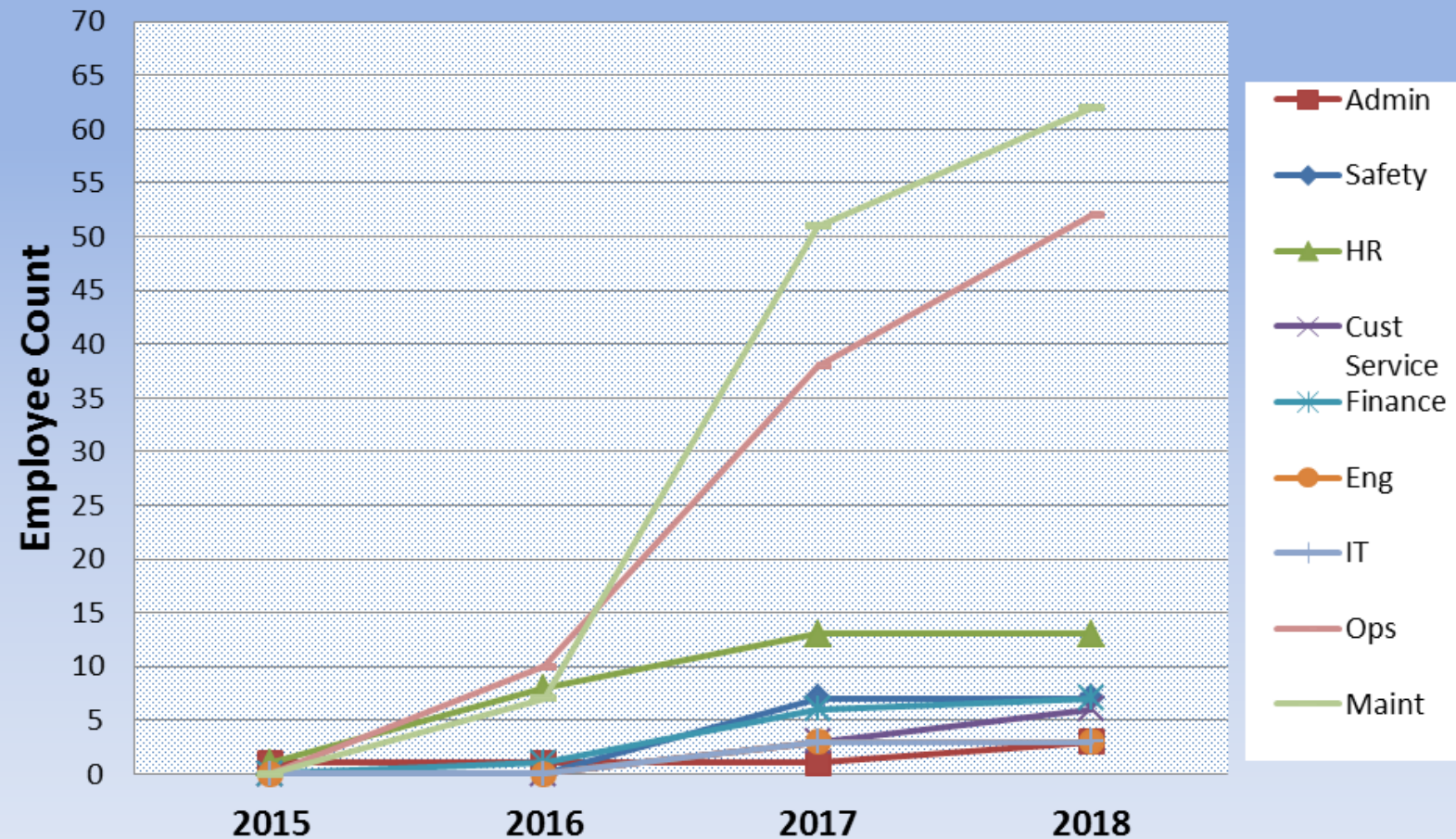
300 Employees by Completion of Center

150 Employees within next two years

* *HART's **local employees** currently comprise **65%** of its entire workforce*

Hiring Timeline

O&M IOMP Mobilization FTE Staffing by Dept



HART needs over 300 employees for its operations and maintenance departments by 2018.

Queen's West Oahu

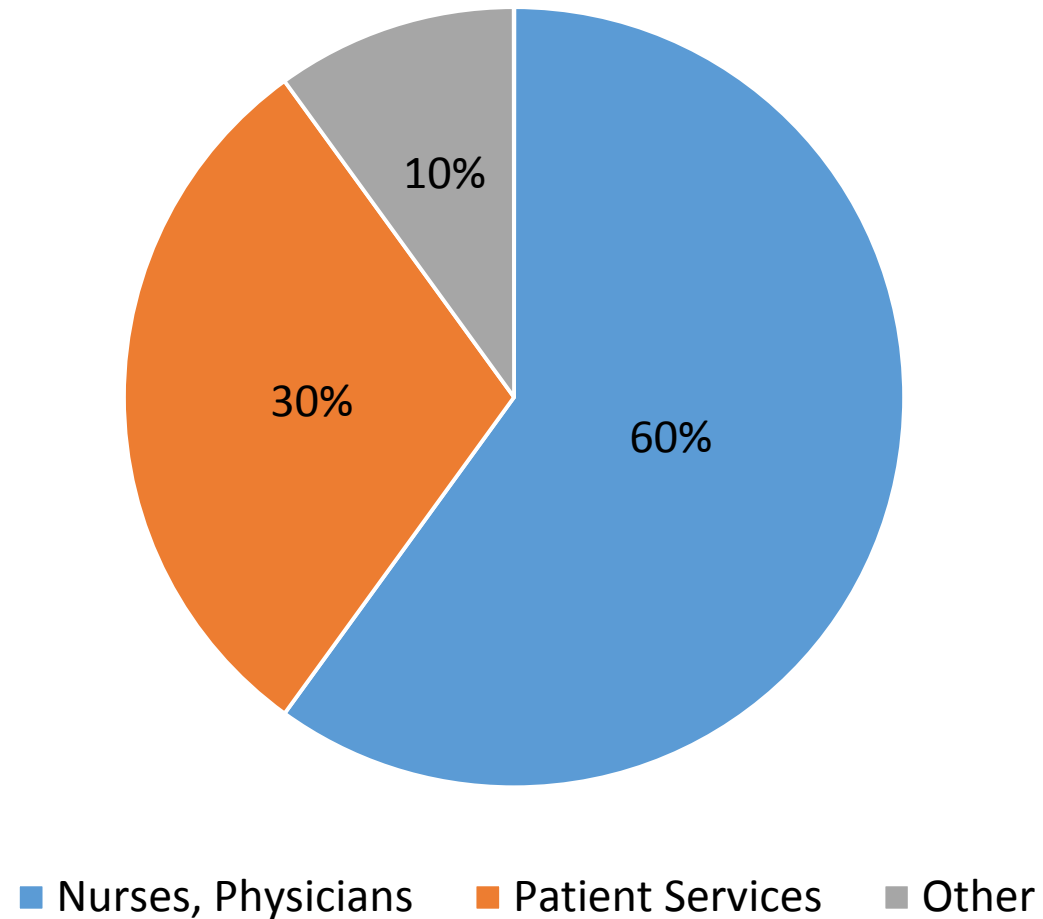
Facilities:

- 10 ICU beds
 - 40 Telemetry beds
 - 30 Medical/Surgical beds
 - 4 Operating Suites
 - 2 Endoscopy Suites
 - 23 Emergency Department bays
-
- 500-employee force
 - Over 50% live within the area

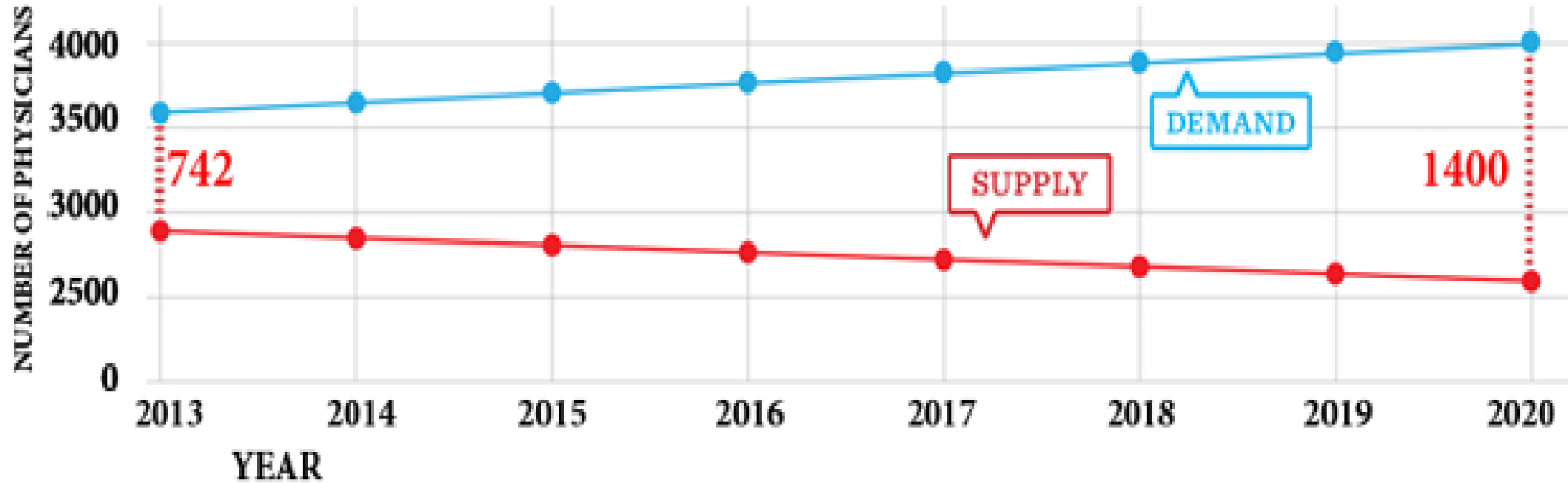


Queen's West - Workforce

Employee Composition



THE GROWING GAP: Hawaii Physician Supply and Demand Projections



*“The **demand** has always been there and, with the population growing, we expect to see more. We’ll need to get more staff, and we’ll use flyers. “*

- Art Ushijima
The Queen’s Health Systems, CEO

9. Future Partnerships

A model we can template

A model we can template: Creating industry/career magnet complexes

Naval Engineering



Creative Media
Technology



Ocean research and
technology



10. Community & Industry

Providing resources and funding

Community/industry to provide resources and funding to fill the traditional gaps

Alumni & Community Association (ACA)

- Secure grants and fundraise for complex schools
- Facilitate partnerships
- Purchase equipment and tools
- Stipends and training for teachers
- Assist with capital campaigns for new facilities
- Assist with community outreach

