Planning for Hawai‘i’s Future
Second Decade, 2010–2020

Office of the Executive Vice President for Academic Affairs/Provost
July 2012

Purpose of Second Decade Project, 2007

• To identify the higher education needs of the State of Hawai‘i in the next decade
• To determine the relative priority of state higher education needs by region of the state

Second Decade Revisited, 2012

• To check our projections relative to 2010 Census data
• To review our outcomes and measures and revise as needed
• To measure our progress on performance indicators

A System of Campuses

• Geographically accessible entry points
• Flexibility for students to move within a system
• Cohesive response to state needs
• Coordinated leadership for resource acquisition and allocation
### State of Hawai‘i by Geographic Region

- [Image of Hawaii map showing different regions]

### Planning Context, 2007 Analysis

- Population growth (# & %)
- High school graduation rates
- Per capita income
- Workforce participation
- Educational attainment (<HS, HS, bach)
- College going rate (2-yr, 4-yr)
- Workforce shortages

### Relative Need for Postsecondary Ed & Training, 2007 Analysis

<table>
<thead>
<tr>
<th>Factors</th>
<th>East</th>
<th>Cent</th>
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<th>E Hi</th>
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<th>Maui</th>
<th>Kau</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce Partic % (Low)</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

**RELATIVE NEED**
- 31
- 31
- 55
- 59
- 45
- 31
- 43
- 40
- 45
- 39

### 4 Cluster Analysis

- [Bar chart showing relative need for postsecondary education and training across different clusters]

**Clusters**
- Very High Need
- High Need
- Medium Need
- Low Need

**Relative Need Scores**
- Very High Need: 49
- High Need: 45
- Medium Need: 43
- Low Need: 39

- [Bar chart showing relative need for postsecondary education and training across different clusters]
Updated Planning Data

State Population

Total Population, 2010

State of Hawai‘i = 1,360,301

Relative Need for Postsecondary Ed & Training

Based on Change in Population (Δ), 2000–2010

Statewide: +148,764

Kaua‘i: 67,091
Honolulu: 388,886
Maui: 131,896
Hawaii: 154,924

High Need
Medium Need
Low Need
Very High Need

Source: U.S. Census Bureau, Census 2000 and 2010

Source: U.S. Census Bureau, Census 2010
**Relative Need for Postsecondary Ed & Training**

Change in Population (%), 2000–2010

<table>
<thead>
<tr>
<th>Region</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide</td>
<td>+12.3%</td>
</tr>
<tr>
<td>West</td>
<td>+23.7%</td>
</tr>
<tr>
<td>Molokai</td>
<td>+19.8%</td>
</tr>
<tr>
<td>Maui</td>
<td>+20.5%</td>
</tr>
<tr>
<td>East Hawai‘i</td>
<td>+20.5%</td>
</tr>
<tr>
<td>Kaua‘i</td>
<td>+14.8%</td>
</tr>
<tr>
<td>Kona</td>
<td>+14.8%</td>
</tr>
<tr>
<td>West Maui</td>
<td>+14.5%</td>
</tr>
<tr>
<td>East Maui</td>
<td>+8.9%</td>
</tr>
<tr>
<td>Central Maui</td>
<td>+4.6%</td>
</tr>
<tr>
<td>North Shore</td>
<td>+3.9%</td>
</tr>
<tr>
<td>Windward</td>
<td>-0.5%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau; Census 2000 and 2010

**Change in Hawai‘i Population by Age Group, 2000–2010**

Projected Change in Population, 2010–2020

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15</td>
<td>+10.1%</td>
</tr>
<tr>
<td>15-24</td>
<td>+10.1%</td>
</tr>
<tr>
<td>25-34</td>
<td>+12.7%</td>
</tr>
<tr>
<td>35-44</td>
<td>+18.6%</td>
</tr>
<tr>
<td>45-64</td>
<td>+14.8%</td>
</tr>
<tr>
<td>65-84</td>
<td>+34.5%</td>
</tr>
<tr>
<td>85+</td>
<td>+31.5%</td>
</tr>
</tbody>
</table>

Source: DBED&T

Projected Population Growth, Age 65+, State & County, 2010–2020

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Hawai‘i</td>
<td>+4.9%</td>
</tr>
<tr>
<td>Honolulu County</td>
<td>+9.6%</td>
</tr>
<tr>
<td>Maui County</td>
<td>+6.9%</td>
</tr>
<tr>
<td>Oahu County</td>
<td>+36.7%</td>
</tr>
<tr>
<td>Kauai County</td>
<td>+5.7%</td>
</tr>
<tr>
<td>Hawaii County</td>
<td>+30.7%</td>
</tr>
</tbody>
</table>


Relative Need for Postsecondary Ed & Training


Updated Planning Data

Per Capita Income & Workforce Participation

Source: U.S. Census Bureau, American Community Survey, 2006-10 Estimates, 5-Year averages, historical data, Table S3.
Relative Need for Postsecondary Ed & Training

Per Capita Personal Income, 2010 Inflation Adjusted Dollars

Statewide: $28,882

**Factor #4**

**Statewide:** 66.8%

Source: U.S. Census Bureau, American Community Survey, 2006-10 5-Year Estimates

Updated Planning Data

Educational Attainment

Population Age 18–24 with <HS Diploma

Statewide: 9.0%

Source: U.S. Census Bureau, American Community Survey, 2006-10 5-Year Estimates
Relative Need for Postsecondary Ed & Training

Population Age 18–64 with Only a HS Diploma

Statewide: 29.4%

Note: The UH system going rate is the percentage of Hawai‘i high school graduates entering the University of Hawai‘i without delay upon graduation from high school.

Sources: IRAO (UH); NCES IPEDS (state); NCHEMS (national).

Going Rates of Public and Private High Schools, UH System

UH System Going Rates

Fall 2011 = 38.4%

Note: The UH system going rate is the percentage of Hawai‘i high school graduates entering the University of Hawai‘i without delay upon graduation from high school.

Sources: IRAO (UH); NCES IPEDS (state); NCHEMS (national).

Going Rates of Public and Private High Schools, UH System and State of Hawai‘i

Total Hawai‘i Going Rates

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Note: The UH system going rate is the percentage of Hawai‘i high school graduates entering the University of Hawai‘i without delay upon graduation from high school.

Sources: IRAO (UH); NCES IPEDS (state); NCHEMS (national).

Going Rates of Public and Private High Schools, UH System, State of Hawai‘i, and the Nation

Total Hawai‘i Going Rates

Fall 2011 = 38.4%

Note: The UH system going rate is the percentage of Hawai‘i high school graduates entering the University of Hawai‘i without delay upon graduation from high school.

Sources: IRAO (UH); NCES IPEDS (state); NCHEMS (national).
Relative Need for Postsecondary Ed & Training

UH 2-Year Going Rates, Fall 2011

Statewide: 25.6%

Source: UH IRAO

UH 4-Year Going Rates, Fall 2011

Statewide: 12.8%

Source: UH IRAO

Average Annual Net Migration of 22 to 64 Year Olds by Education Level (2008–10)

Updated Planning Data
Workforce Shortages
Projected Job Openings, 2008–18

Hawai‘i: Emerging Opportunities

Enterprise Honolulu Projections:
- Life Science / Biotechnology
- Information Technology
- Telecommunications
- Film & Digital Media
- Diversified Agriculture

Hawai‘i’s Demand Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Annual Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s degree or higher</td>
<td></td>
</tr>
<tr>
<td>Elementary school teachers</td>
<td>330</td>
</tr>
<tr>
<td>General / operations managers</td>
<td>300</td>
</tr>
<tr>
<td>Secondary school teachers</td>
<td>300</td>
</tr>
<tr>
<td>Accountants / auditors</td>
<td>170</td>
</tr>
<tr>
<td>Property / real estate / community association managers</td>
<td>110</td>
</tr>
<tr>
<td>Network systems / data communications analysts</td>
<td>90</td>
</tr>
<tr>
<td>Associate degree or higher</td>
<td></td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>330</td>
</tr>
</tbody>
</table>

Projected Annual Vacancies in Shortage Areas Statewide, 2006–17 and Total UH Output, 2007–11
Summary of Planning Factors

- Population growth (# and %)
- High school graduates
- Per capita income
- Workforce participation
- Educational attainment (<HS, HS, bachelor's)
- College going rate (2-yr, 4-yr)
- Workforce shortages

Relative Need for Postsecondary Ed & Training

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<thead>
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<th>Maui</th>
<th>Kau</th>
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<tbody>
<tr>
<td>Pop Growth (M)</td>
<td>High</td>
<td>Med</td>
<td>Med</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
<td>Med</td>
</tr>
<tr>
<td>Pop Growth (%)</td>
<td>High</td>
<td>Med</td>
<td>Med</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
<td>Med</td>
</tr>
<tr>
<td>Proj HS Grad (#)</td>
<td>Very High</td>
<td>Very High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Med</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
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<tr>
<td>Proj HS Grad (%)</td>
<td>High</td>
<td>Med</td>
<td>Med</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Very High</td>
<td>Med</td>
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<tr>
<td>Per Capita Income</td>
<td>Low</td>
<td>Med</td>
<td>High</td>
<td>Med</td>
<td>Med</td>
<td>High</td>
<td>High</td>
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<tr>
<td>Median Particip</td>
<td>High</td>
<td>Med</td>
<td>Low</td>
<td>Med</td>
<td>Med</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Going Rates (2-yr)</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Very High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
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<tr>
<td>Going Rates (4-yr)</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Very High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
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<tr>
<td>Skilled Workforce Needs</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
</tr>
</tbody>
</table>

RELATIVE NEED 37 31 49 57 39 29 45 47 47 41

Public Higher Education Agenda

1. Increase the educational capital of the state
   Hawaii Graduation Initiative
2. Address underserved regions/populations
   Hawaii Innovation Initiative
3. Expand workforce development
4. Diversify the economy
5. Renew and expand infrastructure
   Renovate to Innovate
Hawai'i Graduation Initiative

“Increase student participation and completion, particularly Native Hawaiians, low-income students, and those from underserved regions”

“55% of Hawai'i’s working age adults to have a 2- or 4-year degree by 2025.”

President Greenwood

P-20 GOAL: INCREASE 2- OR 4-YEAR DEGREE ATTAINMENT OF WORKING AGE ADULTS (25 TO 64) TO 55% BY 2025

Cumulative Degree Gap: 60,791 degree holders

GOAL: INCREASE 3–6% PER YEAR
Increase Student Completion

15 to Finish

Addressing Need Via Distance Education

Undergraduate Credits Taken

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total</th>
<th>Distance Ed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>261,613</td>
<td>38,319</td>
</tr>
<tr>
<td>2006-07</td>
<td>264,738</td>
<td>39,915</td>
</tr>
<tr>
<td>2007-08</td>
<td>264,738</td>
<td>38,715</td>
</tr>
<tr>
<td>2008-09</td>
<td>1,078,764</td>
<td>114,846</td>
</tr>
<tr>
<td>2009-10</td>
<td>1,018,400</td>
<td>106,450</td>
</tr>
<tr>
<td>2010-11</td>
<td>998,295</td>
<td>98,305</td>
</tr>
<tr>
<td>2011-12</td>
<td>931,395</td>
<td>89,705</td>
</tr>
</tbody>
</table>

14.2% 9.7% 9.1% 10.4% 12.1% 13.3% 14.2%

Addressing Need Via Distance Education

Number of Technology-Assisted Distance/Distributed Learning Classes by Offering Campus

Hawai‘i Graduation Initiative

“To position the UH as one of the world’s foremost indigenous-serving universities”

Hawai‘i Papa o Ke Ao
Hawai‘i Graduation Initiative

“Increase student participation and completion, particularly Native Hawaiians, low-income students, and those from underserved regions”

$44m of Institutional Aid Awarded in 2010–11
Increase Student Participation

Over 14,000 students from the Classes of 2013, 2014, and 2015 STEPPED UP

Going Rates of Hawai‘i High Schools to the UH System

GOAL: INCREASE 3% PER YEAR

Hawai‘i Innovation Initiative

“Contribute to the state’s economy and provide a solid return on investment”
**Goal: Build a $Billion+ Research Industry in Hawai’i**

- A vibrant economy
- High-paying jobs
- Clean, green industries
- An entrepreneurial culture
- Bring and keep our keiki home

**UH Extramural Fund Support**

- Goal: Increase 3% per year

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1.165B</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1.66B</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2.15B</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2.68B</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>3.45B</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>4.47B</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
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</tr>
</tbody>
</table>

**Strengthen Our Areas of Excellence**

- Astronomy/space sciences
- Ocean, earth sciences
- Health sciences

**Hawai’i Innovation Initiative**

**Enhance Emerging Strengths**

- Clean energy
- New agriculture
- Cancer research

**Build Up New Areas**

- Advanced informatics and cyberinfrastructure
- Health sciences, obesity, diabetes, etc…
The Plan

- Double our research initiative over next 5–8 years
- Attract more than 50 new world-class scientists
- Form crucial relationships among private sector, state, and international partners

Investment / Return on Investment

- Approximately $10–12 million a year
- The ROI would be thousands of new jobs in the state, new discoveries, new supporting businesses and opportunities

UH Patents, Disclosures, & Licenses

Goal: Increase 5–15% Per Year

Two Initiatives That Must Succeed Together

“Address critical workforce shortages and prepare students for effective engagement and leadership”
Renovate to Innovate

Triple Bottom Line
- Create Hawai‘i construction jobs
- Improve facilities to compete
- Leverage funds to increase RTRF

Renew and Expand Infrastructure

Major Construction Projects, 2009 to Present
- Cancer Research Center: $723.0m
- Edmondson Renovation: $15.3m
- Biomedical Sciences Bldg. Court B renovation: $1.5m
- Bilger Complex Air Conditioning System Upgrades: $5.7m
- Institute for Astronomy, R/R HVAC Equipment: $2.6m
- Biomedical Sciences Building, R/R Cage Washing: $5.3m
- C-MORE: $21.0m
- Institute for Astronomy, R/R HVAC Equipment: $2.9m
- CTAMR Renovation: $3.9m
- Institute for Astronomy, R/R Cage Washing: $5.3m
- C-MORE: $21.0m
- Webster Hall: $7.5m

Total: $184.7m

Major Design Projects, 2009 to Present
- College of Pharmacy (UH Hilo): $38.0m
- Snyder Renovation: $40.5m
- Pacific Health Research Center: $47.5m

Total: $126.0m
Summary

• Data reinforce priorities
• Initiatives on target
• Initiatives reinforce each other
• Need to update & extend performance measures
• 2013–2015 Biennium Budget proposal needs to support initiatives