

## UNIVERSITY OF HAWAII NOTICE OF EXEMPTION FROM CHAPTER 103D, HRS

The President, University of Hawaii, is in the process of reviewing the request from  
Office of the Vice President for Community Colleges \_\_\_\_\_ (Department/Campus) for exemption  
from Chapter 103D, HRS, for the following goods, services, or construction:

Student academic pathway, skills alignment/badging, and job matching software solution that uses natural language processing and machine learning/artificial intelligence to match students with employers based on a commonly defined and refined skills taxonomy based on natural language processing and refined through the use of machine learning.

**Vendor:** Viridis Learning, Inc.  
(If known)  
**Address:** 330 3rd Avenue, Suite 8A  
New York, New York 10010

<b>Term of Contract:</b> (If known)	<b>From:</b> (To be determined)	<b>To:</b> (To be determined)	<b>Cost:</b> \$75,000.00 (estimated)
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**Direct any inquiries to:**  
Department: University of Hawaii Maui College  
  
Contact Name/Title: Lui Hokoana, Chancellor  
  
Address: 310 Kaahumanu Avenue, Kupaa 202  
Kahului, Hawaii 96732-1617

Phone Number:  
(808) 984-3636

Fax Number:

Date Posted: February 13, 2019

Submit written objections to this notice to issue an exemption from Chapter 103D, HRS, within seven (7) calendar days from the date posted to:

Office of Procurement and Real Property Management  
1400 Lower Campus Road, Room 15  
Honolulu, Hawaii'i 96822

**REQUEST FOR EXEMPTION FROM CHAPTER 103D, HRS**

TO: OFFICE OF PROCUREMENT AND REAL PROPERTY MANAGEMENT

FROM: Office of the Vice President for Community Colleges  
(Department/Program)

Pursuant to APM Section A8.220, the Department requests a procurement exemption to purchase the following:

Description of goods, services, or construction:

Student academic pathway, skills alignment/badging, and job matching software solution that uses natural language processing and machine learning/artificial intelligence to match students with employers based on a commonly defined and refined skills taxonomy based on natural language processing and refined through the use of machine learning.

Estimated Cost: \$ 75,000.00 (estimated)

(1) Explanation describing how procurement by standard competitive means is either not practicable or not advantageous to the University;

See attached.

(2) Details of the process or procedures to be followed in selecting the vendor to ensure as fair and open competition as practicable;

See attached.

(3) A description of the Department's internal controls and approval requirements for the exempted procurement; and

See attached.

(4) A list of Department personnel, by position title, who will be involved in the approval process and administration of the contract:


John Morton, Vice President of Community Colleges  
Michael Unebasami, Associate Vice President for Administrative Affairs  
Lui Hokoana, Chancellor, UH Maui College  
Erica Lacro, Chancellor, Honolulu Community College  
Lisa Tsuhako, Fiscal Administrator, Community Colleges

Direct questions to: Lui Hokoana Phone: (808) 984-3636

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TO THE BEST OF MY KNOWLEDGE, TRUE AND CORRECT.

Michael Unebasami, Associate Vice President for Administrative Affairs

Full Name of Principal Investigator, Department Head, or Administrator

  
Signature 1/25/19  
Date

Lisa Tsuhako, Fiscal Administrator


Full Name of Fiscal Officer

  
Signature 1/25/19  
Date

APPROVED:

John Morton, Vice President of Community Colleges

Full Name of Vice President or Chancellor

  
Signature 1/28/19  
Date

FOR OPRPM USE ONLY

OPRPM COMMENTS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPROVED  DENIED

  
PRESIDENT, UNIVERSITY OF HAWAII

2/27/19  
DATE

## Request for Exemption from 103D, HRS

**(1) Explanation describing how procurement by standard competitive means is either not practicable or not advantageous to the University;**

The acquisition of this solution is for a beta test that will run at UH Maui College and Honolulu Community College for a one year period to assess the application of national language processing and machine learning to matching student's skills with employer identified needs. These beta testing services will be based on an initial assessment performed on the technology available for non-credit workforce programs and courses.

In 2015, Honolulu Community College contracted with Viridis for a system-wide initial assessment that applied the Viridis technology to non-credit workforce programs and courses for the Community Colleges. The requested services are to beta test the initial assessment performed by Viridis on credit Career Technical Education (CTE) programs of study, specifically at Honolulu Community College and UH Maui College.

The University of Hawaii Community Colleges office (UHCC) would like to beta test the ability of natural language processing to capture, scrub, and normalize data on skills required for occupations in CTE fields of healthcare, construction, and IT. Natural language processing is a branch of artificial intelligence that helps computers understand, interpret and manipulate human language. It is a rapidly advancing technology in human-to-machine communications, that can process large amounts of data with powerful computing and enhanced algorithms. In addition to having done the initial assessment, Viridis is a company that uses this technology to capture skills published by employers in different geographic regions of the state. Viridis is a cloud-based SaaS technology platform that integrates with student information systems, government databases and labor market information to connect students to employers. Their focus is on connecting community colleges and their students to workforce investment boards and local employers based on verified knowledge, skills, and abilities. This beta test will allow the UHCC to evaluate the ability of this technology in a timely manner and capture regional variations in the description of skills as published by employers and match these regional differences through a common skills taxonomy to CTE skills developed in students at UH Maui College and at Honolulu Community College.

UHCC is requesting a procurement exemption to test and evaluate this technology as it is applied to integrating the colleges' existing data infrastructure to connect students, schools, and employers and see if it will meet our needs. UHCC would like to start the beta testing in the Spring of 2019 so that we can capture data for the Summer and Fall 2019 semesters to accurately assess the machine learning capabilities to improve the skills matching capabilities. The one year contract period would allow us to complete the system implementation and capture data for analysis on the skills alignment, badging capabilities and student/job matching capabilities through the use of non-PPI data.

Because the initial assessment applied the Viridis technology to non-credit workforce programs and courses, procurement by standard competitive means is not practicable or advantageous for this beta test. In addition, if the beta testing at Honolulu Community College and UH Maui College proves successful, the UHCC may choose to expand the program to all of the community colleges via a formal competitive process.

**(2) Details of the process or procedures to be followed in selecting the vendor to ensure as fair and open competition as practicable;**

Having determined that procurement by standard competitive means is neither practicable nor advantageous, the UHCC is requesting to negotiate directly with Viridis for the beta testing services.

Through the initial assessment performed by Viridis, Honolulu Community and UH Maui College became familiar with the pathway modeling capabilities and the features that are unique to the Viridis technology. A comparison of the Viridis technology with other vendors with similar services is set forth below:

<b>FEATURES</b>	<b>Viridis</b>	<b>EMSI</b>	<b>CSO/ Grad Leaders</b>	<b>Starfish /STAR</b>
<b>Students Features</b>				
Skills Identification	X			
Skills Aggregation	X			
Pathway Construction	X			X
Pathway Management	X			X
Skills Badging	X			
Skills Backpacking	X			
Resume Posting	X		X	
<b>Employer Features</b>				
Job Posting Aggregation	X	X	X	
Job Posting Deconstruction	X	X		
Required Skills Identification	X	X		
<b>Student/Employer Skills Match Features</b>				
Skills Matching	X	X		
Machine Learning to improve skills match	X			
Common Taxonomy of Skills	X			
Career Pathway Matching	X			

In addition, the UHCC uses other data tools that provide Labor Market Information, provide job placement services, or provide early alert and student pathway management solutions. However, these tools do not provide the comprehensive skills and job matching capabilities using the Natural Language Processing technology. The above comparison table also highlights the features that allow us to apply machine learning to managing student pathways that lead to job placements and the capabilities of the systems that we currently use.

Lastly, to ensure that the cost for the services to be performed by Viridis is fair and reasonable, the UHCC will perform a price reasonableness/cost analysis on the negotiated amount for the services.

**(3) A description of the Department's internal controls and approval requirements for the exempted procurement;**

A University of Hawaii Agreement for Services will be executed that specifies the necessary requirements and deliverables which will be signed by the vendor and a University of Hawaii authorized representatives. The university will also require the vendor to agree to the UH Data Governance approved Data Sharing Agreement to ensure any data sharing requirements meet the specifications of federal and state law and UH policy. Furthermore, the UHCC will work closely with the vendor and monitor its work to ensure that milestones are met and that the vendor performs in accordance with the terms and conditions of the agreement.