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Winter Member Meeting

February 22-23, 2016

Key Themes

BHEF Winter 2016 Member Meeting

Overview

BHEF's Winter 2016 Member Meeting, which occurred on February 22-23 on the Miami Dade College campus, focused on the growing demand for analytical talent, ways institutions are responding to this demand, and how BHEF can provide better market intelligence for business and higher education leaders.

The discussions at this meeting made clear that the growth of the digital economy, the emergence of the Internet of Things, and the imperative to extract meaningful, actionable insights from massive amounts of data though data science and analytics are long-term trends, not passing fads. Students and employers are demanding more data literacy and skills, presenting an opportunity for institutions to provide more data-intensive educational offerings.

BHEF will focus on data science and data literacy as a priority moving forward. Over the next year, BHEF will partner with PwC and IBM to develop market intelligence that will help members better understand trends in data science and make decisions about responding to and capitalizing on these trends

Key Themes

Economic growth requires regional ecosystems that align with demand for diverse, highly skilled talent.

In the digital economy, sustained economic growth requires an ecosystem that develops a diverse analytical talent pool, which can address real-world problems with data. Keys to the creation of this ecosystem include close linkages and collaboration among government, higher education, and business. Key stakeholders must work together more effectively to define essential new skills and competencies in emerging fields and form strategic partnerships to develop these skills in undergraduate students.

However, while many parties recognize the importance of dynamic and responsive talent ecosystems, participants agreed that regional labor markets are not as effective as needed in rapidly developing talent in emerging fields, including data science. Primary factors include:

- **Lack of adequate information.** Higher education leaders lack adequate information about the current and anticipated needs of employers, and students lack information about demand for graduates with particular majors and skills. This lack of

information and transparency prevents the labor markets from performing as effectively as they could.

- **Lack of effective partnerships.** Despite ongoing dialogue between employers and educators, existing partnerships often fail to develop talent with the high-demand skills that employers seek. BHEF's strategic partnerships have proven more effective in aligning higher education with regions' high-demand, high-skill talent needs.

BHEF is addressing both deficiencies by providing workforce analyses that document employer demands for more analytical talent and by creating greater strategic partnerships between business and higher education to develop high-skill talent.

Many sectors have experienced rapidly growing demand for more analytical, data-literate talent.

Participants in each session at the meeting provided evidence of the significant demand for highly analytical, data-literate specialists (data engineers and data scientists) as well as increasing general demand for broad data literacy. This demand is evident in all industries and regions, and, at the moment, demand for data-literate, analytical talent has significantly outstripped supply. In addition to this industry demand, students are requesting analytical courses and programs from educational institutions.

The rapid emergence of the Internet of Things (IoT)—with interconnected, smart devices producing massive amounts of data—will further accelerate the demand for data-literate, analytical talent, as organizations increasingly seek to extract value from the data produced by the IoT.

Dr. Eduardo Padrón, President, Miami Dade College, and Chair, BHEF

Educational institutions are responding to the demands for data-literate talent in multiple ways.

BHEF members shared multiple models for responding to the demands for data-literate, analytical talent. Some institutions are developing masters programs for data scientists, while others are developing undergraduate majors, minors, and certificates. Badges are also being explored as a means of demonstrating skills developed in specific programming languages and analytical tools to supplement broad foundational knowledge and skills. Where data science and analytics programs are offered, demand is high.

In other instances, educational leaders are emphasizing broad data literacy for all students, with all majors, based on the belief that in today's digital economy, data literacy is a new language in which all graduates must be conversant.

> **In today's digital economy, data literacy is a new language in which all graduates must be conversant.**

Dr. Eduardo Padrón, President, Miami Dade College, and Chair, BHEF, and Ryan Oakes, Managing Director, Accenture

Current and more detailed market intelligence can help institutions respond to market demand.

About five years ago McKinsey published data projecting the number of data scientists that would be needed, as well as the number of data analytics-enabled managers. However, the world has evolved significantly since these big-picture estimates were first published, and updated data that identifies specific needs by industry and region has not been produced.

Addressing this informational void presents an opportunity for BHEF to provide significant value to members. At the 2016 Winter Member Meeting, BHEF announced partnerships with PwC and IBM to work together over the next year on conducting and publishing detailed research on trends in the world of data science and analytics. This market intelligence will help higher education leaders make strategic short- and long-term decisions on how to respond to market demands in ways that provide students with new learning and employment opportunities.

Roger Ferguson, President and CEO, TIAA, Wes Bush, Chairman, Chief Executive Officer, and President, Northrop Grumman Corporation, and Peter Weinberg, Partner, Perella Weinberg Partners