

# Forging Industry-Academic Alliances

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## ABSTRACT

With ever increasing amounts of data, organizations are identifying the importance of Business Intelligence (BI) and Analytics for decision making. However in order to realize the full potential of these technologies, organizations require well-trained and educated management and analytic subject matter experts to transform the data and results into actionable information for decisions.

In order to meet this demand for analytical talent, a Center for Business Intelligence and Analytics (CBIA) housed within the university seeks to develop knowledge and skills vital in the fast changing field of business, through developing the next generation of managers and analysts with skills in decision-making through use of analytical techniques. This presentation provides the strategic framework for the definition and development of a CBIA and framework for joint academic and industry collaboration to develop the next generation of industry experts. The core components including industry demand, alliance objectives including objectives, curriculum and talent requirements, and opportunities.

**Keywords:** Center, Data, Business Intelligence, Analytics, Industry-Academic Alliance

## 1. INDUSTRY DEMAND

With ever increasing amounts of data, organizations are identifying the importance of Business Intelligence (BI) for decision making. Gartner recognized BI as one of the fastest growing areas despite minimal economic growth, as organizations seek to compete and differentiate themselves through data based decisions. However in order to realize the full potential of BI technologies, organizations require well-trained management and analytic subject matter experts to transform the data and results into actionable information for decisions. A McKinsey Global Institute report identified requirements for 1.5 million additional analytic staff, with a shortfall due to knowledge gaps within the current workforce. In another SAS survey nearly three quarters of organizations indicated an investment priority of improving analytical skills of current employees, with more than half indicating a priority of hiring more analytical talent [1,2,3,4,5]

The Center for Business Intelligence and Analytics (CBIA) seeks to develop knowledge and skills vital in the fast changing field of business administration, through developing the next generation of business managers and analysts with skills in decision-making through use of analytical techniques. This document provides the strategic framework for the definition and development of a CBIA, and operate in collaboration with existing departments and schools at the university and partner

universities, along with the multi-disciplinary framework for joint academic and industry collaboration to develop the next generation of BI industry experts. The CBIA can then be utilized to drive university growth and take advantage of increased sector growth over the next several decades [6,7]

The CBIA consists of two main components, the knowledge center and research center. The knowledge center consists of operational aspects such as curriculum and skills development: program and project management, technical support, training, data stewardship, analytics, data mining, performance management, data acquisition, and delivery. The second component, the research center seeks to develop publication quality research and development. This includes establishing the participating members as leaders in research and development, gaining industry exposure through peer review outlets, incorporating empirical methodology for educational modules, and improving understanding of theoretical backgrounds and implications. The knowledge and research center components work closely together to provide feedback on current practices, identify future trends and opportunities, and improve overall CBIA value [6,7].

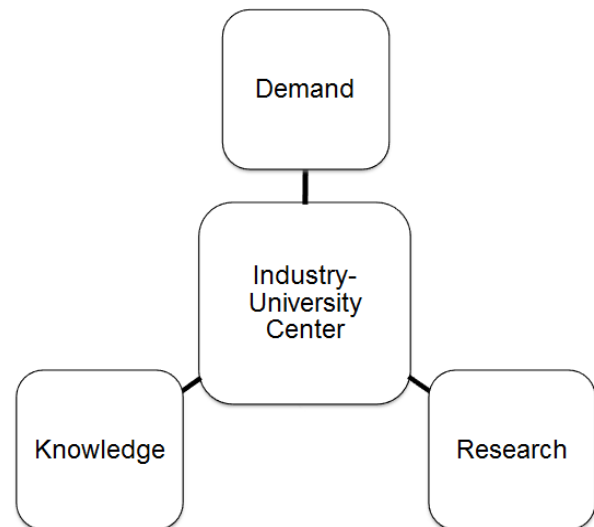


Figure 1. Industry-University Structure

## 2. INDUSTRY-ACADEMIC ALLIANCES

Industry organizations recognize universities for their rich talent pool of enthusiastic students and expert faculty, with the universities recognize business organizations as a source of real-world problems and commercialization. The center alliance allows organizations to source research and join together with a university to develop competitive advantages, provide input for curriculum and research focus, and drive

innovation. Table 1 displays a list of aligned objectives from an industry and academic perspective. Applied curriculum and talent requirements are also described in further detail [8].

Table 1. Industry-Academic Alliance Objectives

Academic	Industry
Partnerships	Partnerships
Broaden Student Experience	Broaden Employee Experience
Broaden Faculty Experience	Source Outside Subject Matter Expertise
Grants Support	Economic Development
Employment Opportunities	Access to Trained Labor Pool
Placement	Secure Top Talent
Curriculum Development	Applied Industry Training
Educational Events	Continuous Learning
Interesting Problems and Innovation	Intellectual Property

### Applied Curriculum

A key component of the center is establishing formal curriculum programs through best practices established in industry and research, in order to prepare students for future contributions and career paths. The curriculum is centered around a core curriculum consisting of business intelligence, business analytics, information systems, and multi-disciplinary concentration courses with areas including: Accounting, Finance, Computer Science, Management, Sports, Economics, Marketing, and Healthcare. For example a technology student can take marketing electives to broaden their marketing background, or similarly a marketing student can take computer science to expand their technical background. This allows the capability to expand curriculum tracks while maximizing use of existing programs.

Examples of program and curriculum enhancements include adding a career component and resume development to introductory courses, adding certificate programs to courses, such as those offered by the International Institute of Business Analysis [9], including simulations on mobile devices, and applied course projects. The certificate is available to student that successfully complete the course and core competencies related to the professional setting. The course projects are also linked to business opportunities or problems, such that the students are involved in a real-world exercise application and the organization benefits from the project output. The overall criteria guiding the curriculum consists of five components and is also shown in figure 1, these include: analytical thinking, application of ethical principles, understanding business principles, evaluating business globally, and communicating effectively.

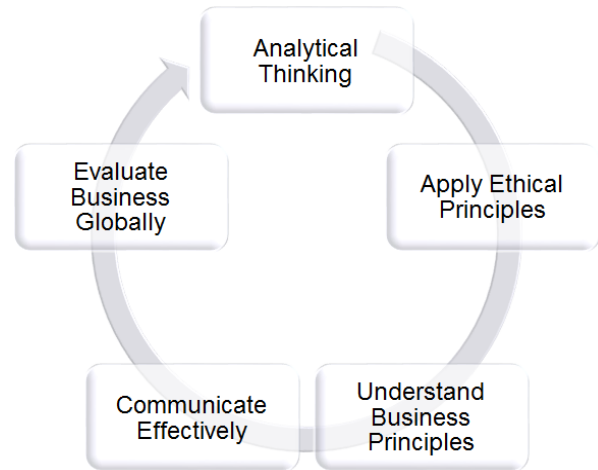


Figure 2. Program and Curriculum Criteria

### Talent Requirements

Talent is considered a key requirement of the center output and success. In order to prepare industry-ready professionals a blend of analytics and domain knowledge, skills, and abilities are included to provide the necessary learning foundation. Domain knowledge would include the specific area or field that someone may specialize in, and where the analytical skills may be applied. Healthcare Analytics would be one example of a specialty where students would require analytics training though also be knowledgeable of healthcare terminology and the industry to improve their opportunity for a successful career in their chosen field.

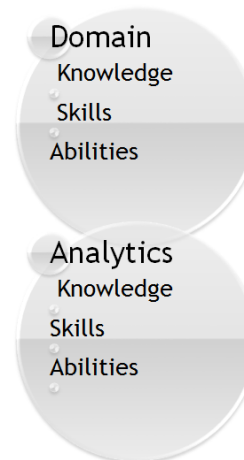


Figure 3. Domain and Analytics Intersection

### 3. OPPORTUNITIES

The center opportunities are organized around a set of four pillars or 4 P's including: Programs, Projects, Placement, and Partnerships. These are available at varying timeframe commitments and consist of several components as shown in Table 2.

Table 2. Industry-Academic Opportunities

Pillar	Timeframe	Components
Programs	Daily+	Educational Workshops Speaker Series
Projects	Monthly+	Funded/Joint Research Experiential Coursework
Placement	Quarterly+	Internships Employment
Partnerships	Annual +	Advisory Board Joint Research

#### 4. CONCLUSION

Industry-Academic Alliances are increasingly important in the competitive marketplace. Both organizations and universities must leverage these relationships to gain respective value. The components for objectives, applied curriculum, and talent requirements are outlined to provide the framework for developing a joint industry-academic center and maximize the advantage of the resulting opportunities available.

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