

Technology Asset Grant Program Letter of Intent

Lead Applicant: Columbus Collaboratory, an Ohio limited liability company to be formed (“Collaboratory”)
Address: 505 King Avenue, Columbus, Ohio 43201
Project Title: Columbus Collaboratory

Estimated State Funds to be Requested: \$5,000,000

Estimated Total Project Cash Cost over three years: \$20,000,000 - \$26,000,000

Collaborators: The Columbus Collaboratory project is a novel collaboration of companies from multiple industries in Central Ohio:

- American Electric Power (Energy)
- Battelle (Research and development)
- Cardinal Health (Health care)
- Huntington Bancshares, Inc. (Retail and commercial financial services)
- L. Brands, Inc. (Consumer retail)
- Nationwide Insurance (Insurance and financial services)
- OhioHealth (Health care and hospital services)

The above companies (“Collaborators”) have non-binding intentions to form the Collaboratory for the purpose of managing and operating the Columbus Collaboratory (official name to be determined). The Columbus Collaboratory intends to focus on information technology-related initiatives, specifically big data, analytics, and cyber security initiatives.

Intended Use: These Ohio Third Frontier funds are intended for the acquisition of capital assets necessary to startup and operate a physical collaboration environment with state-of-the-art data science, analytics, big data and cyber security hardware, software, and facilities.

Summary of Proposed Project

Problem Statement

The Collaborators share a common connection to Columbus, where these organizations started planting roots as early as 1866. Fast forward to 2013 and these companies share two common and highly significant challenges—how to apply advanced data analytics efficiently and expertly to monetize the vast, exponentially growing data that are being generated daily, and how to protect that data. Similarly, with this rapidly changing data landscape, these companies face increasingly sophisticated cyber security threats. During interviews in 2012 and 2013, leaders from across these companies cited meeting these challenges as imperative to gaining new customer insights and intelligence, achieving greater customer intimacy, sustaining talent needed to compete in the digital economy, and protecting customer- and competition-sensitive data. Each Collaborator creates economic value in different market segments with different purposes including:

- Safe and efficient utility infrastructure and service delivery
- Science and technology discoveries
- Better, safer, cost-effective healthcare delivery
- Healthcare and hospital services
- Superior banking experience in local markets
- Exceptional retail consumer experience
- Secure financial futures and asset protection.

The Collaborators recognize that their competitive advantage depends on big data and effective cyber security, but also recognize that demand for talent in these and other emerging disciplines is outstripping the supply, and the trend is expected to continue. McKinsey forecasts that the demand for analytics talent in the United States will be 50 to 60 percent greater than supply by 2018. The need to invest in specialized hardware and software to protect data and intellectual property from aggressive attacks while enterprises become more mobile and transition to cloud environments complicates the data analytics environment even further.

The Collaborators propose an innovative approach to their shared problem—a shared solution that builds on the acute understanding of the opportunities for growth, productivity, and innovation through leveraging resources in capital and talent investments.

Project Goals and Objectives

The proposed solution - form the Collaboratory - an entity for the Collaborators to collectively invest in to address shared business challenges, opportunities and outcomes, and to generate an economic return on investment in the areas of big data, analytics, and cyber security. To achieve these goals the Collaboratory will establish a sustainable collaboration environment comprising investments in facilities, infrastructure, people, and processes to enable the desired level of successful collaboration and collaborative outputs. The Collaboratory will use awarded funds to create the infrastructure needed to meet the Technology Asset Grant objectives and to meet the project goals of the Collaborators, as Table 1 highlights.

Table 1. The Columbus Collaboratory’s goals address needs of Industry and the State.

TAG Program Objective	Collaboratory Approach for Industry and State Engagement and Funds	Benefit to Industry and State
Industry Scale	Invest in shared technology environment, identify cross-cutting issues, leverage best practices, and generate shared solutions	Cuts across multiple, diverse Ohio industry sectors, but encompasses common challenges in big data, analytics, and cyber security
Technology-based Competitive Advantage	Leverage advanced technology in shared infrastructure for collective problem-solving, training, education, attraction, and retention of scarce talent	Focuses on evolving and growing the IT sector, an area where Ohio’s Fortune 500 companies strive to build capabilities in emerging high-demand disciplines
New Tech-based Services and Products	Invest in applied research projects to tackle common as well as unique business problems and challenges within the shared, collaborative environment	Generates solutions for Ohio companies to deploy and which can be developed and commercialized as products and services offered to other companies
New Jobs	Generate new, high-value IT jobs, develop a global competitive capability, and establish an Ohio-based IT showcase	New high-end IT jobs in central Ohio that help elevate the region in the IT space and retain talent, with potential attraction of new companies
Investment and Return	Build critical partnerships with the State of Ohio, involve diverse industries in identifying problems, engage academic institutions in curriculum development and delivery, and collaborate with research institutions for solutions	Pathway for addressing talent demand for companies with currently identified need and also creating approximately 100 jobs over 3 to 5 years as industry continues to recognize competitive advantage of the qualified talent

Technical and Commercial Approach and Work Plan

The first step toward a successful Columbus Collaboratory is to create a sustainable collaboration environment through investments in facilities, infrastructure, people, and processes to enable both the *sharing of data* and *sharing of knowledge* about data. Investments in collaboration readiness, infrastructure readiness, and technology readiness create the required environment and incentives for accomplishing the Collaboratory’s activities.

Overall Activities: The Collaboratory will address specific activities in two technology platforms: Data and Analytics and Cyber Security. These platforms, coupled with relevant tools, processes, and capabilities, provide the foundation for addressing new and emerging big data and cyber security challenges facing business today. For example, the data and analytics platform would potentially address advanced customer and call analytics, fusion of third party and proprietary data, enterprise data governance, and application development and maintenance. The cyber security platform could potentially address security operations, incident response, cyber analytics, threat intelligence, and cyber

forensics. The Collaboratory provides the environment and systems for project teams comprising staff from the Collaboratory as well as member companies to work together. The design of this collaborative, high-tech environment enhances the attraction, training, and retention of skilled and talented staff and provides a space for other collaborators and startup companies to contribute solutions to problems and challenges the Collaboratory undertakes.

Equipment and Facilities: The Collaboratory design and purpose provide the environment for experimentation, testing, and design of novel solutions that member companies can deploy within their operations or which the Collaboratory may license and deploy commercially. The environment encourages cross pollination of ideas and best practices and the sharing of knowledge among the diverse groups, and creates the ideal hands-on learning environment for new and existing staff. Commercialization of intellectual property generated in the Collaboratory will be software-related products and/or services. Creating these products and/or services requires access to the technology (e.g., high-end hardware and software) and related infrastructure that will exist in the Collaboratory.

Management: This shared methodology for problem solving also requires a shared management and operations approach for executing a clearly articulated business model and work plan. The Collaborators are creating the Collaboratory to implement the Columbus Collaboratory project; each founding member shares ownership equally and serves on the governing body. Each Collaborator, having an equal equity interest, will be entitled to appoint one voting member to the Collaboratory's governing body. The Collaboratory will establish a management team with recognized subject matter expertise to manage and operate the Collaboratory.

Commercial Maturity of the Technology / Market Acceptance

The proposed Collaboratory creates both a physical and virtual space for addressing emerging markets for the Collaborators that recognize the need for products and services to manage and exploit the almost exponential increase in available data, as well as the need to stay ahead of the exploding cyber security threat landscape and associated risks. The activities, initiatives, and projects within the Collaboratory have immediate market relevance as these efforts represent specific challenges and opportunities facing Fortune 500 companies both in Ohio and across the country. The McKinsey Global Institute recently identified the top technologies that they predict will disrupt the way we live and do business today ("Disruptive Technologies," May 2013.) These technologies, which McKinsey indicates could have a massive, economically disruptive impact between now and 2025, include four with the highest potential of economic growth across all industries—mobile internet, automation of knowledge work, the Internet, and cloud technology. These technologies are inextricably aligned with or connected to big data, analytics, and cyber security services and products.

Projected Impacts

Investing in state-of-the-art big data, analytics, and cyber security infrastructure and related technology platforms presents significant challenges for individual companies because the highly specialized technology continually changes to address evolving needs. Consolidating these investments in one entity for the benefit of many provides an immediate return on investment for the companies involved through cost sharing and access to these platforms. The Collaboratory allows the Collaborators to generate value from leveraging the shared investments in the infrastructure and resources of the Collaboratory and provides the Collaborators with the following benefits with short-term returns:

- Cost savings and efficiencies in operations
- Common and individual initiative/project outputs
- New product research and development for deployment in operations
- Incumbent workforce development and training
- Mechanism for attracting, training, and retaining top IT talent for all equity investors.

The Collaborators also will potentially realize longer-term returns through intellectual property (“IP”) commercialization in the form of sales of products and/or services, licensing of IP, and/or the creation of new start-up technology companies.

The Collaboratory offers both a quantitative and qualitative impact on the broader Ohio economy with potential job creation of 100 technology jobs over three to five years. The first jobs will be within the Collaboratory and within the Collaborators’ workforce and later may extend to start-ups that emerge from Collaboratory-generated IP. The Collaboratory will likely generate significant unquantifiable economic value in the form of education and workforce development, although tying that impact directly to specific economic dollars is difficult. However, the Collaboratory will undoubtedly affect the quality of the Ohio IT workforce, talent attraction, and retention in central Ohio, all of which has the potential for future growth in Ohio. The Collaboratory’s partnership with universities in developing specific curricula focused on big data, analytics, and cyber security will broadly affect the workforce across Ohio as non-Collaboratory companies look to these colleges and universities for talent.

Sustainability

During the three-year Ohio Third Frontier project period, subject to entering definitive formation agreements to establish the Collaboratory, the Collaborators will invest the required cash cost share in the form of equity investments and annual subscription fees. Collectively these investments provide the operating capital and funding to support the specialized technical equipment and facilities through the project period. In exchange for the annual subscription, the Collaborators will receive services and share in the outputs and benefits of shared project activities. The Collaborators as well as outside partners will be able to secure tailored project services from the Collaboratory on a fee-for-service basis. The annual subscription fees and project fees will represent the annual revenues for the Collaboratory. Each Collaborator will commit to a minimum of one million dollars per year for the three-year Ohio Third Frontier project period. In addition, to sustain the Collaboratory, each Collaborator will commit to a fourth year of minimum financial investment of one million dollars (one year beyond the 3-year Ohio Third Frontier project period). Additionally, during the initial three years, the Collaboratory will invest in technology platforms, equipment, marketing, and business development to establish a customer pipeline for ongoing products and services.