

January 18, 2008

Dr. Julie Schaid, Executive Director Partnership for Continued Learning 30 E. Broad St., 36th Floor Columbus, OH 43215

Dear Dr. Schaid:

College of Education and Human Services Office of the Dean

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In collaboration with a strong regional partnership of public school districts, career technical centers, the region's business community, Wright-Patterson Air Force Base (WPAFB), higher education institutions, EDvention (Miami Valley's P–20 Council) and others, Wright State University is pleased to submit a strong proposal for the establishment and operation of the Dayton Regional STEM School (DRSS). We are poised to take full advantage of the funding opportunities offered through Am. Sub. H.B. 119.

The partnership that is reflected in this proposal draws strength from the resources and commitments of each partner, while blending our assets uniquely to create a school learning community that fosters in students an excitement and desire to learn, solve rigorous problems, discover new solutions and work collaboratively on reality-based projects.

Reviewers of our proposal ultimately must ask, "Why Dayton, and why now?" We believe we have uniquely compelling answers to those questions.

- The Dayton region has a *strong legacy of successful collaboration* and *demonstrated success in public-private partnerships* involving school districts and career technical centers, educational service centers, colleges and universities, businesses and business organizations, Wright-Patterson Air Force Base, EDvention and others that have committed resources to support STEM initiatives in our region.
- We have a *one-of-kind centerpiece resource—Wright-Patterson Air Force Base*—one of the largest and most comprehensive military bases in the world and the site of the headquarters for Air Force Research Laboratories. Five of the ten research labs being created as part of a \$1.6 billion U.S. Air Force research initiative will be located within one mile of our proposed STEM school, providing our students and teachers with authentic learning experiences unrivaled anywhere in Ohio.
- We have a *strong STEM support infrastructure already in place*, which will enable us to hit the ground running. Our National Governors Association-supported Dayton Regional STEM Resource Center is operational, STEM Fellows have been appointed, a STEM Education Summit has been held to engage regional leaders in initial planning, and the STEM curriculum is already being developed.
- We have a *unique implementation plan* designed to move more young people more quickly into STEM learning environments.
- Our region's proud *spirit of innovation and invention* is deep-rooted in history and still tangible today; and collectively, we have the *imagination and will* needed to ensure that our venture is successful.

Wright State University will serve as the fiscal agent, and I will serve as the contact. Our proposal is requesting an award of \$600,000. To date, we have garnered \$2,208,000 in matching funds. The Dayton region is ready for transformational change. We are determined to take bold actions that bring all of our schools out of the 20th century and drive STEM literacy for all students as they prepare themselves for success in college and the workplace—and throughout their lives as citizens. We are ready to begin work immediately with plans to open the Dayton Regional STEM School in the fall of 2009.

Gregory R. Bernhardt, Dean

# Developing the Dayton Region's Talent Base

A Bold Plan for Transforming STEM Education and Building a 21st Century Workforce

**Introduction.** At the heart of this proposal is an *aspiration* and a *commitment to align*, as never before, the Dayton Region's educational assets and outcomes with its economic needs and opportunities. We face a serious and widening gap between our regional workforce capabilities and the scientific,

technical and problem-solving skills required in knowledge-economy jobs. What is required is a fresh approach to human capital development, work that must begin with erasing arbitrary lines between education and workforce development. *Effective*STEM education is the key to this transformation.

There is no greater priority for ensuring the economic vitality of the Dayton Region, which has seen its historical strength in manufacturing steadily decline over the past decade. Yet, despite the resulting economic downturn, great optimism permeates the region. The positive impact of U.S. military base realignment on Wright-Patterson Air Force Base (WPAFB), a growing technology base and continued strength in the transportation sector merge to create significant opportunities for

## **Our Partners in the Dayton Region**

Higher Ed: Clark State, Sinclair, Central

State, Univ. of Dayton, Wright State

School Districts: Fairborn, Huber Heights,

West Carrollton, Xenia, Miami Valley Career

Technology & Greene County Career Centers

Educational Service Centers: Montgomery,

Clark, & Greene County ESCs

Business and Industry: Dayton Area
Chamber, Mound Laser, Standard Register,
CDO Technologies, Dayton Dev. Coalition,
Time Warner Cable, LexisNexis, ID Cast,
Inventis

Government: Wright-Patterson AFB and the Air Force Research Labs (AFRL)

Other: EDvention, Dayton Regional STEM
Center, Western Ohio Center for Excellence

enhancing research, economic development and employment opportunities throughout the Dayton region in critical areas such as defense, information technology, and other industry sectors. *STEM education* can – it must – play a key role in positioning the Dayton region to seize these opportunities.

The *mission of the proposed Dayton Regional STEM School* (DRSS) is to prepare students with the skills necessary to compete in the global economy while nurturing in our young people the same enthusiasm for discovery, invention and application that launched the vision for powered flight. This mission will be realized through instructional strategies shaped by the following *values:* 

- The school will serve as a dynamic teaching and learning community linked to the strong history of innovation and cutting-edge research conducted in the Dayton region.
- Students and their families, as well as community, education institutions and research/industry
  partners, will be active and full members of the learning community.
- learning experience dedicated to using STEM across a liberal arts curriculum to solve problems;

  (b) set goals and work to obtain the skills, knowledge and experiences that will position them for future success, particularly in the STEM disciplines; (c) participate in authentic real-world experiences with practicing scientists, engineers and technical professionals at WPAFB's Air Force Research Laboratories (AFRL) and other research/industry sites; and (d) participate in challenging and accelerated opportunities to demonstrate content mastery, as well as earn college credit while in high school, as an important springboard to every student attending college.
- The school will serve as a regional resource for teaching and learning, sharing experiences, curriculum and lessons learned with educators, teacher education programs and students across the region; bolstering teaching capacity; and accelerating talent development throughout the region. The region's Career Technical Centers and traditional Career Technical Education (CTE) programs will be included in this network.

Reviewers of our proposal ultimately must ask, "Why Dayton, and why now?" We believe we have uniquely compelling answers to those questions, which are spelled out in our cover letter that accompanies this proposal. All of the factors identified in that letter create a STEM "landscape" in the Dayton region that is uniquely rich, with great forward momentum.

Hearkening to the region's historic leadership in aerospace, we would characterize our region as being at a propitious "launching point" for enhancing the essential synchronicity between workforce capabilities and workplace needs. We believe the time is right for reinvigorating the region's already vibrant STEM landscape with additional investment in the form of a STEM School Partnership Grant.

Governing Authority (2.1). The DRSS comprises representatives from partnering organizations that officially have committed organizational resources to support STEM initiatives in the Dayton region. The

DRSS design team has collaborated with the partnering organizations with the advice of legal counsel to structure a legal governing authority made up of individuals who are able to assist in developing organizational capacity to achieve STEM education excellence. The governance structure further reinforces the integration of the school in all aspects of community life and development, which in turn will help guarantee the school's sustainability and impact over time.

The **DRSS Governing Board** will be responsible for establishing policies and for oversight of the school's operations. Similar to a traditional K-12 school board, the Governing Board will serve as a policymaking body but will leave day-to-day

## **DRSS Governing Board**

- Professor or practicing professional from a College of Engineering
- Professor or practicing mathematician from a
   College of Arts and Sciences or Mathematics
- Professor or research scientist from a College of Arts and Science
- Representative (Rep.) from a College of Education
- Rep. from a College of Medicine or Allied Health
- Rep. from Miami Valley Career Technology Center
- Rep. from Greene County Career Center
- One Rep. each from Montgomery, Greene & Clark
   County ESCs
- Two reps. from private sector STEM industries
- Exec. Dir. of the Dayton Regional STEM Center
- Rep. from WPAFB/AFRL (Ex-officio)
- Rep. from the DRSS PTO/PTA(Ex-officio)
- A DRSS grade 6-12 STEM educator (Ex-officio)

operations of the school to the school's chief administrative officer (CAO), licensed educators and staff.

Because the Board will function in a true oversight and accountability role, its membership will be composed of individuals with appropriate levels of expertise in both STEM and education,

thus fulfilling the clear intent of the RFP to have STEM expertise represented. Terms will be staggered over three years.

A second group, **the DRSS Advisory Council** will consist of high-profile community leaders as well as leaders of organizations in the region that have committed to support the DRSS and regional STEM initiatives. The purpose of the Advisory Council will be to advise and make recommendations to the Governing Board regarding DRSS policies and how the DRSS may best accomplish its mission. Advisory

Council seats will be filled by individuals within DRSS partner organizations, eliminating the need for someone to make appointments to the Council.

Compliance (2.2). The DRSS will adhere to all mandates listed in Chapter 3326 of the ORC, as detailed in the education plan and sponsor contract, and will comply with all applicable federal, state and local laws.

Curriculum Principles (2.3). The Dayton region is uniquely positioned to design and

## **DRSS Advisory Council**

- Presidents of Wright State, University of Dayton,
   Sinclair, Clark State and Central State
- Executive Directors of Dayton Development
   Coalition and Dayton Area Chamber of Commerce
- Superintendents of partnering school districts,
   Education Service Centers and Career Technical
   Centers
- CEOs of STEM industries in the region
- Representatives of supporting regional foundations
- High-ranking official from WPAFB

implement an innovative and distinctive STEM curriculum that will set the DRSS apart from other STEM schools and in so doing advance the educational research agenda on how to best educate a STEM-capable workforce for tomorrow's economy. Viewed broadly, the DRSS curriculum will be designed to reflect project- and problem-based learning within a continuum of inquiry processes that develop and increase in rigor as students grow in their ability to acquire and apply knowledge and skills. Our established network of regional coordination and collaboration provides many opportunities for P-20 STEM education experiences grounded in real-world applications of science, technology, engineering, and mathematics. Specifically, during the planning year, the Dayton Regional STEM Center will coordinate teams of teachers, higher education faculty and WPAFB and industry professionals who will design

interdisciplinary project- and problem-based curricula that will form the basis of DRSS instruction. These curricula will be disseminated throughout the region by the STEM Center. More specific details follow.

The DRSS curriculum will be designed to take advantage of the unique resources of the Dayton region as students will be able to participate in internships planned collaboratively with WPAFB and local high technology sector employers, in which students will be able to work side-by-side with professionals on active research projects and innovative solutions to real-world problems with immediate economic impact. In addition to the internships, the design of the DRSS curriculum will ensure a real-world orientation as it will be focused on project and problem-based solutions to challenging, complex and rigorous real-world situations as informed by WPAFB and local industry, providing contexts that engage students in both scientific inquiry and the technological design process. (RFP 2.3.1)

The curriculum design will acknowledge the importance of engaging learners in scientific practices by posing questions and presenting problems to motivate students to further investigate STEM content by involving them in the processes of scientific discovery such as investigation, argumentation, explanation and scientific modeling – as often as possible in real-world laboratory, business or industry settings. In addition to opportunities afforded by WPAFB and local industries, DRSS will offer the following curricula that incorporate scientific inquiry and technological design: *Adventure Engineering*, an adventure-driven, engineering-based curriculum for grades 5-9; *Investigating and Questioning Our World Through Science and Technology*, a standard-based, comprehensive middle school curriculum that focuses on science's "big ideas" and employs research-based practices shown to promote students' science practice and science literacy; *My World GIS*, a Geographic Information System environment designed for educational settings allowing students to explore and analyze data integrating areas of social studies, technology, science, math and engineering; and *GLOBE*, which involves real-world data collection and monitoring using scientific protocols developed by researchers and scientists worldwide. (RFP 2.3.2)

The DRSS curriculum will include more than just STEM disciplines, as the arts and humanities are important to educating each student for a life of creative thinking. Our enriched arts and humanities

curriculum will provide cultural, historical and ethical contexts for scientific inquiry. Throughout the arts and humanities curriculum, the emphasis will be on inter- and cross-disciplinary activities. Learners will come to understand the historical impact of science on culture – and the impact of culture on scientific practice. History, government and economics curricula will include close study of how developments in science and technology can shape policy, economics and social organization, as well as the impact political culture, economics and social organization have on the direction of scientific inquiry. Modern languages curriculum will emphasize broad cultural awareness as it affects cross-cultural exchange of knowledge and language acquisition, concentrating on those language groups most likely to factor heavily in STEM fields in the foreseeable future, including Chinese and Arabic. (RFP 2.3.3)

At DRSS, teachers and counselors will work with each student to create a Personalized Learning Plan (PLP) that utilizes the Ohio Individual Academic and Career Plan (IACP), mentoring, dual credit and internship opportunities. The PLP will be aligned with each student's post-secondary goals. (**RFP 2.3.4**)

DRSS students will participate with faculty in designing their own developmentally appropriate independent and group-based investigations. Through research and problem-based principles of learning, students will be able to explore concepts based on their individual interdisciplinary interests and talents while learning from the research and projects of their classmates. This style of learning will also be applied to "learning teams" – groups of two or more students working to design and execute projects. The final outcomes will reflect not only an increase in knowledge of subject matter, but also the personal growth that must occur for students to be confident and successful. (RFP 2.3.4)

The DRSS curriculum will provide for learning in an inclusive environment that requires recognizing and fulfilling the learning needs of the whole student including fostering the intellectual, emotional, physical, social and moral aspects of a student's development. WSU's School of Professional Psychology, College of Nursing and Health, Department of Health, Physical Education and Recreation, and the Boonshoft School of Medicine are committed to providing counseling, fitness facilities and clinical facilities. For example, the College of Nursing and Health will provide a school nurse and other

support to address the health needs of the DRSS students. In this way WSU will support a healthy environment for the students of DRSS. (RFP 2.3.5)

To promote rigor and diversity, the curriculum will be designed to include four credits each of advanced math, laboratory sciences, language arts and social studies; three credits of foreign language; two credits selected from art and music; one-half credit each of health and physical education; and two elective credits. *Collectively, these 24 credits exceed the Ohio CORE curriculum*. With engineering and technology infused throughout the curriculum, the DRSS Curriculum Committee will ensure alignment with Ohio's Academic Content Standards, as well as with the vision encapsulated in standards set forth by national organizations such as National Council of Teachers of Mathematics and National Science Teachers Association, as well as emerging national standards for K-12 engineering curriculum. The DRSS will offer an Early College curriculum through which each student will earn up to the equivalent of one year of college or AP credit. (RFP 2.3.6)

Student progress will be individually assessed and addressed via holistic frameworks directed towards performance-based authentic accountability. Building on "backwards design," the curriculum design team will identify learning goals and derive learning performances that illustrate how students should use the scientific ideas and skills in real tasks. After identifying standards and learning performances, the team will consider problem scenarios that can serve as a context for learning and applying STEM knowledge. Within this context, the team will design tasks and assessments that engage learners in designing solutions and demonstrating ideas. The team will then design instructional sequences that will develop and revisit ideas and skills over time. Throughout the process, the team will evaluate the alignment of learning activities and ongoing assessments with the learning goals and adjust as necessary. This competency framework (See RFP 2.20) will provide a clear basis for awarding course credit. (RFP 2.3.7)

The DRSS will use heterogeneous grouping for instruction. Groups will require multi-abilities of group members to solve, manage and complete complex tasks that require the contributions of all group members. Authority will be delegated to students, requiring responsibility for their own and others' learning. The curriculum will support student performance and production as teams through meaningful

problem solving, interdisciplinary units, assessment measuring a variety of abilities and contributions, and flexible scheduling that allows students to engage in problem solving for extended periods. (RFP 2.3.8)

The Curriculum Design Team will coordinate curricula and develop interdisciplinary learning experiences grounded in STEM contexts to broaden student understanding of not only content and processes, but also cognitive and social skills, as well as personal traits for work success. *Science*, *technology, engineering and mathematics curricula will be fully integrated* to provide richer learning experiences with real-world contexts and applications. Interdisciplinary modules grounded in real-life STEM contexts will emphasize economic clusters and related topics. (RFP 2.3.9)

Technology will be infused as an enabling tool in all course modules. Interdisciplinary projects such as research projects, design projects and internships will be developed by teacher teams with industry, business and community partners. The STEM Center and associated industry and higher education "STEM Fellows" will provide resources and support, including internship opportunities provided by regional partners of EDvention, such as the AFRL and local businesses.

In accordance with ORC 3326.09, an eight-member committee will approve the use of curriculum materials in the areas of science, technology, engineering and mathematics. The committee will be comprised of two STEM discipline teachers and one arts/humanities teacher from the DRSS; one mathematics educator and one science educator from one of our partner institutions of higher education; a representative from WPAFB; a community member or parent with expertise in the application of science, technology, engineering or mathematics; and the DRSS principal/CAO of the school. The committee's recommendations will be submitted to the Governing Board for approval.

**Leadership** (2.4). By empowering all members of the DRSS community, a *culture* of leadership will evolve in which the CAO, faculty and staff, students, parents and other partners all "own" the school mission, vision and work – and share responsibility for making DRSS a success.

Recruitment of a core team to drive the initial phase of the school design and development is a current priority. To date, the team includes university and community/school partners who have been driving the DRSS project and will soon include four teacher leaders and the CAO. As the pivotal leadership position

in the DRSS, the CAO must exhibit an unwavering commitment to building organizational capacity by fostering a collegial environment, investing in others and increasing their personal investment in the STEM mission and vision. The CAO will be a licensed principal with the background, capacity and demonstrated ability to lead, inspire, innovate, build trust, question assumptions, maintain a long-range perspective and do the right things for the right reasons. The search for an individual with the necessary leadership capacity and STEM experience is ready to begin.

The dynamics of the core team described above will assure complete commitment to STEM principles detailed in division (C)(3) of section 3326.03 of the ORC.

Professional Development (2.5). The DRSS's Comprehensive Professional Development Plan (CPDP) will meet and exceed all State Professional Development Standards/Indicators. The CPDP will include ongoing, job-related, job-embedded training and experiences in areas such as instructional models and learning strategies, Baldrige criteria for performance excellence training with associated "quality tools," personal effectiveness training, meeting and facilitation skills, leadership training, teaching in an interdisciplinary environment, assessment of best practices, personalized learning, team and project-based learning, time management, team building and technology integration.

DRSS professional staff will agree to complete an annual minimum of 40 hours of professional development experiences, participate in peer support and small learning team initiatives, and work collaboratively with the STEM Center and partnering districts (with compensation). DRSS staff will drive professional development activities based on "real time" recognition of need and employ action research methodology to address real issues as opposed to mere symptoms. Peer coaching and networking will play a vital role in creating a collegial environment where everyone is involved in finding solutions rather than perpetuating problems through inactivity and enabling behavior.

The STEM Center will include a DRSS teacher as a STEM Fellow and will provide other STEM Fellows to work with staff at DRSS, partnering districts, higher education institutions, and business and industry to develop and implement appropriate professional development initiatives. DRSS will become a

professional development site for teachers across the region who will be able to visit and observe STEM activities aligned to industry clusters as taught by the Fellow.

Other professional development strategies will include supporting National Board Teacher

Certification; providing sufficient time to prepare high-quality, interdisciplinary instructional experiences;

developing incentives for expanded professional development responsibilities; and promoting research on
adolescent development and alternative educational delivery for students in urban contexts.

Pre-service teachers will be paired with DRSS faculty to support daily instruction. They will acquire a substitute teacher license (those with a Bachelor's Degree) and will provide instructional coverage for DRSS faculty presenting at conferences, meeting with curriculum resource teams, and teaching demonstration lessons in area schools. Finally, DRSS will work with the STEM Center to coordinate meaningful pre-service activities, including professional development emphasizing inquiry-based pedagogy and cross-disciplinary STEM curricula.

Collaboration (2.6). The Dayton region has built an unparalleled set of STEM-focused partnerships that will support the success of the DRSS. Partnering academic institutions have collaborated on several STEM pipeline development initiatives, including a National Science Foundation STEM Talent Expansion Program that delivers upper-level math to students in the context of first-year engineering courses. This program is being expanded to community college courses, scientific disciplines outside of engineering and courses adapted for a high school setting.

EDvention has led numerous STEM development activities with DRSS partners, creating an important STEM infrastructure that will support teaching and learning at the DRSS. EDvention galvanized partners through a STEM Education Summit, setting a comprehensive framework for regional action to improve STEM education throughout the P-20 pipeline. The organization serves as a catalyst for action by leveraging existing resources across institutions, facilitating the creation of highly competitive solutions, strategies and funding proposals. EDvention is leading the development of the Dayton Regional STEM Center and engaging national experts in developing innovative teaching and learning strategies.

The *STEM Center* will provide access to innovative STEM curriculum and national experts; opportunities to field test curriculum; professional development opportunities for staff to participate as STEM Fellows; a regional internship/co-op matching system; a regional academic clearinghouse of opportunities for STEM learning; access to business partners who engage with EDvention, the Dayton Area Chamber of Commerce and the Dayton Development Coalition; opportunities for STEM coaching and technical assistance; and facilitated networking opportunities with other schools in the region implementing STEM teaching and learning.

Feeder and partner school districts will contribute their considerable expertise in school operations and pedagogy, as well as select specialized approaches to student engagement. The AFRL and corporate partners will provide laboratory and research experiences that engage students in real-world problem solving. The WPAFB Education Outreach Office will bring extra- and co-curricular experiences to the school to expand student learning. Additional business, industry and professional society organizations will provide career mentors and other support as needed. DRSS also will collaborate with Air Camp, a planned regional learning center modeled on Huntsville's Space Camp and Pensacola's Flight Academy.

Support (2.7). Leveraging in-kind resource opportunities from DRSS partners has strengthened our

ability to sustain school operations with an acceptable level of fundraising to support per-pupil funding provided by the State of Ohio. See the Appendix for detailed commitment letters outlining initial support of more than \$2.2 million from DRSS partners. A summary of prospective



grant funds and already committed cash and in-kind support totaling \$1.574 million for the grant period is provided in the narrative budget forms on pages 17 and 18. Included is WSU's commitment to provide a facility and related services at no cost to the DRSS for the first two years of school operations (2009-10).

and 2010-11). Located adjacent to WSU's campus, the facility's central location to participating districts and the three-county service area makes it ideal.

Contingency Plan (2.8). In the event of school closure and the disposition of assets upon closure, the Governing Board agrees to comply with any and all applicable laws and regulations, subject to restrictions and rights of parties providing private and other funding and assets to the school. The Governing Board will adopt policy and procedures consistent with existing guidance and laws affecting similar institutions for school closure and asset disposition.

Partnership Structure (2.9). The DRSS will be formed as a non-profit entity with the Governing Authority described on page 3 serving as its Board of Directors. This entity will receive the IRN, and state funding received by the school will go directly to the DRSS. This non-profit entity will be empowered to receive, hold and use assets from foundations and private sources and it will have the ability to contract through lease/purchase arrangements for staff and other services with WSU and other organizations.

It is anticipated that DRSS will not directly employ most teachers and staff. Instead, WSU will serve as the primary employer. However, there may be teachers, counselors and back office/administrative staff who are employed by the DRSS or other partners, including school districts.

Student Enrollment (2.10). The DRSS will serve students in grades 6-12 who are residents of Clark, Greene and Montgomery Counties. Students must have been promoted to their assigned grade level and must currently be drug-free. Most importantly, students must have an inquiring mind as evidenced by continued questioning, research and problem solving. But students will not be selected based on academic ability. The school admission plan is as follows:

2009-10:	Grade 9	2011-12:	Grades 7, 8, 9, 10 and 11
2010-11:	Grades 8, 9 and 10	2012-13:	Grades 6, 7, 8, 9, 10, 11 and 12

After the initial four-year phase-in period, all students will enter the school at the 6<sup>th</sup>-grade level. Special situations will be reviewed on an individual case basis by a school resource team. Each grade will have approximately 80 students with total school enrollment not to exceed 600 students.

DRSS partnering districts have an average 22% minority enrollment, of which 13% of students are African American and 36% are economically disadvantaged. These statistics reflect the region and are comparable to state data. The DRSS recruitment strategy will ensure that school enrollment is diverse and representative of regional demographics. Priority will be given to traditionally underserved students with an interest in STEM education. A referral process (teachers, principals, school nurses, truancy officers, social workers, etc.) will be used to identify DRSS candidates. Direct marketing strategies will be employed to build public awareness. Factors that may be considered during the admissions process include, but are not limited to, whether the student is passionate about STEM, is an undiscovered talent that would thrive at the DRSS, would be a first-generation college student and has demonstrated leadership in traditional and non-traditional ways. No student with a recurring history of predatory and/or violent behavior will be admitted, nor will students currently on suspension from other area schools.

The application process will require a family member or child advocate and the student to submit a letter of interest. The child and parent(s) or advocate will interview with school staff and volunteers to discuss mutual expectations and the program. All registrations will be directly handled by DRSS staff. In cooperation with the Dayton Regional STEM Center, the school faculty will select students for admission. If applications far exceed capacity, a lottery plan will be organized and a weighted system will be developed to keep a reasonable gender balance in school enrollment. The admissions process is designed to build investment in this unique opportunity. The DRSS will comply fully with all admissions requirements as stated in ORC 3326.10, 3313.64, 3313.65.

Employment of Faculty (2.11). The DRSS faculty will be comprised of Wright State University (WSU), University of Dayton (UD), Sinclair Community College (SCC), Central State University (CSU), Clark State and AFRL/WPAFB professors along with highly qualified and licensed educational personnel as defined in sections 3326.13 and 3319.074 of the ORC. They will be licensed under sections 3319.22 to 3319.31 of the ORC and rules of the State Board of Education.

The DRSS design team will attend recruitment fairs and recruit nationwide in an effort to identify highly effective and qualified STEM educators. Positions will be posted in national publications and

databases. Additionally, WSU, UD, AFRL/WPAFB, SCC, CSU and Clark State have a wealth of talented recent graduates and employees who are in career transition that will be recruited to supplement instructional needs in the school. One of our key staffing strategies will involve finding a few of the very best teachers available, hiring them and then enlisting them to assist in identifying and recruiting other quality teachers who have the capacity to make significant contributions to STEM teaching and professional development.

Prospective faculty will be required to present portfolio evidence of successful teaching in an innovative/teamed/interdisciplinary environment. They also will be expected to demonstrate a capacity for creative problem solving, innovation, invention, self-reliance, logical thinking and use of STEM disciplines. Individuals with National Board Certification credentials will be given special consideration.

DRSS teachers will be required to design a professional development plan to expand their knowledge and skills in cross-disciplinary and inquiry-based pedagogy, their STEM content knowledge and/or their work with industry partners. They will be required to participate in an extended industry field experience with STEM professionals and produce a project and/or paper related to the experience; participate in training and coaching provided by the Dayton Regional STEM Center; work with a mentor from either industry or education to assist with their professional development; participate in an interdisciplinary team of educators and STEM professionals as a cohort for a period of at least one year; open their classrooms for observation and present their most promising cross-disciplinary curriculum, lessons and outcomes to their peers across Ohio through virtual or other means; and participate in the STEM Center's professional network linking schools throughout the region. DRSS faculty will be compensated for these activities.

The new STEM school license as described in ORC section 3319.28 will be utilized as necessary to employ highly qualified individuals with the necessary content expertise to drive a robust, diverse, integrated and project-based curriculum. The two required components of this license – *structured apprenticeships and training seminars* – will improve teachers' content knowledge and enhance professional development through hands-on, experiential learning. Structured seminars and workshops

will focus on the state's academic content standards and standards for the teaching profession, achievement tests and accountability measures, innovative instructional approaches, student development, remediation and intervention strategies, new instructional technologies, strategies for meeting the needs of special populations, communicating with parents and families, and classroom management.

Relation to Other Schools in the Region (2.12). Both the Dayton Regional STEM Center and EDvention have adopted a "Portfolio Approach to STEM Education." This means that the Dayton region is dedicated to developing a portfolio of STEM learning opportunities that exist in schools through the region, not simply in one specialty school. This portfolio of public, private and community schools will be formally networked through the STEM Center to share lessons learned, engage in world-class professional development and pilot a variety of curricula and approaches to STEM teaching and learning across the P-20 educational pipeline.

DRSS feeder districts will have a very strong and unique relationship with the school, but other Miami Valley area schools such as the David Ponitz Career Tech Center (developed jointly by Sinclair Community College and Dayton Public Schools and scheduled to open in Fall 2009), Dayton Early College Academy, Chaminade-Julienne High School, Jefferson Township Schools, Miami Valley Career Technology Center and Greene County Career Center, will be a part of this regional portfolio. *And again, it needs to be emphasized that the region's Career Technical Centers and traditional CTE education programs will be included in this powerful learning network*.

The DRSS will provide a STEM Fellow to work with other districts in the region, higher education and industry to develop the activities and implement them in their program. The DRSS will become a professional development site as teachers from across the region will be able to visit and observe the STEM activities aligned to industry clusters as taught by the Fellow.

The integrated activities will be designed as part of the regular curriculum in a way that all students will access them as part of the STEM school experience. These activities will be aligned to the academic content standards so that implementation in all schools is possible. Through formal and informal partnerships with districts, all teachers will have access to these activities.

Like the STEM Center, DRSS will become a "proof of concept" model that will identify and share structures and programs that encourage better instruction and achievement for all students in Ohio.

The dissemination of lessons and information will occur through numerous venues, including professional development, a Web-based repository of lessons, and site visits.

Collaboration with Identified Ohio-Based Nonprofit Enterprise (2.13). The DRSS is one component of a comprehensive regional STEM talent development strategy. As such, we already have a close relationship with EDvention and the STEM Center. In fact, individual members of the school's design team serve in roles within these organizations. In those capacities, they have ongoing, significant conversations with Battelle, the developers of the Ohio STEM Learning Network. The DRSS and the STEM Center will work well with Battelle or any other state-designated non-profit that is identified to support the critical work of the school, share experiences and data, and provide curriculum, training and learning options for students and teachers throughout Ohio.

Sustainability (2.14). Sustainability of the DRSS is a responsibility that our partners take seriously. Financial stability and the school's long-term viability are essential to the school's success – and more broadly, the success of Dayton's STEM initiatives.

For this reason, the DRSS partners have crafted a detailed 5-year (2009-14) preliminary budget that identifies all revenue, expenditures, private and public contributions, and direct and in-kind support to be applied to the operations of the school. Inflationary costs, annual salary increases and real estate appreciation have been taken into account and balanced against fluctuating state funding. Our partners have developed a strategic fundraising initiative aimed at alleviating any deficiencies in the annual operations funding of the DRSS. (RFP-FAQ prohibits inclusion of the 5-year budget in the appendix.)

The DRSS partnership grant will allow an expert team of licensed STEM educators to establish the rigorous curriculum that will be required of students attending the school. In partnership with the STEM Center, DRSS will use the grant to assure a balance between what a strong STEM school should be and what a complex partnership group can mesh together, maximizing the strengths and contributions of each of the distinct entities.

Our close relationship with the STEM Center will enable greater sustainability, support and long-term dissemination of lessons learned and our WPAFB/AFRL anchor assures a ready consumer for STEM graduates for the foreseeable future, maximizing the potential for positively impacting economic development in the region. Also, the DRSS design team has taken great care to build a regional partnership that balances costs with what partners can bring to the table on an ongoing basis. For example, Standard Register will provide, on an ongoing basis, the process design expertise that is core to its daily business. In a similar vein, WPAFB/AFRL will provide inquiry-based learning opportunities, just as it will expose students, parents and educators to workforce needs and opportunities within the region.

*Project Budget, Narrative, and Timeline (2.15).* The three forms required by the RFP follow:

	Proposed Budget		
<b>Budget Narrative (Form I)</b> Object Codes		Requested	Other
, , , , ,		State Funds	Support
<b>100 Salaries.</b> Salaries: 10-month contracts for the	Principal	\$100,000	
principal/CAO (planning & start-up responsibilities	Four teachers	\$200,000	
including hiring of personnel), 4 FT licensed teachers to	Clerical	\$30,000	
work on curriculum development, and 1 administrative			
assistant			
<b>200 Retirement/Fringe Benefits.</b> Grant funds for staff	33% fringe	\$108,900	
benefits will total 33% of total salaries. Estimated			
benefits will be 15% of salary and may include medical,			
dental and life insurance. Retirement contributions will			
be 18% of salary.			
<b>400 Purchased Services.</b> Purchased services will	Telecom	\$11,500	
include telecom installation and monthly charges,	Recruiting	\$10,000	
recruitment, marketing, consulting and advocacy, travel,	Marketing	\$20,000	\$20,000
and legal fees. Other support funds include school	Consulting	\$5,600	\$660,000
partners' in-kind support and a \$60,000 contribution	Travel	\$20,000	\$30,000
from DACC for consulting, marketing and travel.	Legal	\$20,000	
<b>500 Supplies.</b> Grant funds will be used for office	Office Supplies	\$5,000	
supplies, copy and fax expenses, and other equipment.	Office Equip.	\$5,000	
Supplies purchased during planning will include	Prof. Dev.		
professional development materials, curriculum and	Curriculum		
books to be used at the school. Computers and software	Textbooks &		
will be donated by STEM school sponsoring partners.	Inst. Materials	\$64,000	
600/700 Capital Outlay (equipment & buildings).		\$0	\$264,000*
WSU will donate a planning facility and facility costs			
for the first 24 months.			
800/900 Other (bonds, bank charges and insurance).		\$0	\$0
TOTAL		\$600,000	\$974,000

Requested funds will be expensed by 11/30/08. Other support funds will be expensed beginning February 2008 through the fall 2009 DRSS opening. See letters of commitment.

\*This budget figure represents only the first nine months for the facility; however, WSU has agreed to provide the facility and facility costs for the first 24 months.

	Proposed Budget	
Budget Narrative (Form II) Object Codes	Requested	Other
S , , , ,	Funds	Support
<b>1000 Instruction.</b> As a planning grant, no direct instruction will occur	\$0	\$0
during the period of this grant, as our request is to engage in the planning of		
instructional services and curriculum for the DRSS grades 6–12 and all		
special services.		
<b>2000 Supporting Services.</b> As a planning grant, all funds will be used	\$600,000	\$710,000
toward supporting services including salaries/fringe benefits of principal,		
teachers, and clerical staff; purchased services including installation of		
telecom equipment, recruitment, marketing, consulting and advocacy, and		
legal fees; supplies for staff; and curriculum development materials.		
District partners will provide consulting services per letters of support.		
<b>3000 Operation of Non-Instructional Services.</b> Non-instructional services	\$0	\$0
are not included as they will not be needed until school start-up in fall 2009.		
<b>4000 Extracurricular Activities.</b> Extra-curricular activities are not	\$0	\$0
included as they will not be needed until school start-up in fall 2009.		
5000 Facilities Acquisition & Construction Services. WSU will provide	\$0	\$264,000
all facilities for the planning phase of DRSS. A 12,000 sq. ft. facility will be		
made available to DRSS during the planning phase of 2008–2009.		
7000 Other Uses of Funds. N/A	\$0	\$0
TOTAL	\$600,000	\$974,000

Grant funds will cover planning from February through November 2008. Other support covers the period from February 2008 to school opening in the Fall of 2009.

Commitment Letters (2.16). See Appendix for detailed letters of commitment from DRSS partners.

These 26 letters reflect commitments in excess of \$2.2 million. They include commitments from five

 $colleges\ and\ universities\ (\$525,\!000);\ six\ Career\ Technical\ Centers\ and\ school\ districts\ (up\ to\ \$400,\!000);$ 

three ESCs (up to \$250,000); and 12 business/industry partners and WPAFB (up to \$1.06 million).

**Reporting Requirements** (2.17). Required mid-year and end-of-year fiscal progress reports will be prepared in the required format and on the dates specified. The DRSS Governing Board and Treasurer will have prescheduled school finance/budget work sessions to make such information readily available.

Site Visits (2.18). As a STEM school demonstration site, the DRSS will have the capacity to work with scheduled and unscheduled visitation teams for purposes such as information sharing, observation and evaluation of school progress toward STEM goals and program design.

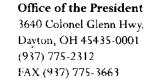
Data Collection (2.19). The DRSS will comply with all state-mandated data-reporting procedures by working closely with the Regional Data Center to submit all required Educational Management Information System (EMIS) reports. An electronic grade book and instructional management system similar to ProgressBook will allow student demographic and academic information to be collected on a daily basis. Programs such as Progress Book also include tools required for students with an Individualized Educational Plan (IEP). Ohio's Academic Content Standards will be tied to lesson plans and academic progress data for easy tracking of student progress on the standards.

The DRSS will request historical data from each student who enrolls, including past performance scores on State Achievement Tests, as well as grades, classes completed and attendance from previous years' academic pursuits. Additionally, student growth scores that were used to determine their home school and district value-added scores will be included in the data request, which will allow DRSS to continue to document each student's academic growth. To measure progress, the DRSS will develop a database for tracking additional indicators that are not currently contained in EMIS reports, including data on professional development, organizational climate and student/parent/community feedback.

Credit Based on Demonstration of Competency (2.20). Courses will be segmented into competency modules of which students will be required to achieve 90% mastery of the content and other performance requirements in each module before advancing to the next. Course credit will be awarded when 90% mastery is achieved in all segments of the course. The courses will have structure but offer significant opportunities for students to advance through coursework at their own pace. Each course will include at least one competency module requiring students to work collaboratively to advance to the next module. The Curriculum Design Team will develop a performance-based plan to determine the specific curricular competencies for each course and will be in full compliance with the State Board of Education's competency plan once it has been adopted. The DRSS will consult the Ohio Department of Education regarding specifics of the plan prior to implementation. A general description of the process for developing the performance-based competency plan is provided in section 2.3.7.

## **Timeline**

Actions	Activities	Resp. Party	Timeline
Identification/ Commitment of Partners	Phase 1 is completed with 27 partnership agreements. Phase 2 involves ongoing recruitment efforts to sustain increased capacity of DRSS enrollment and programmatic needs. Partnership agreements are based on the assumption of mutual needs and services as DRSS interfaces with the community.	Susan Bodary (EDvention)	Phase 1 – 1/15/08 Phase 2 – Ongoing
Governing Body Established	Governing Board will be appointed by the Advisory Council, which will be appointed by WSU. Both Boards will receive training and job descriptions detailing their duties. Sixteen priority tasks are on Governing Board's expanded task/timeline. Preliminary Business Plan is complete with a 5-year budget projection. Final operating budget will be approved by the Board when all members are appointed. Treasurer/business manager is a priority position, with 22 priority tasks associated with this position.	Dr. Greg Bernhardt (WSU)	Governing Board Appointed – 5/08 Advisory Council Appointed – 3/08 Final Budget Approved – 6/08
School Leadership Defined	The DRSS principal/CAO posting is ready for release to professional journals and associations, foundations and partner organizations. Search team of DRSS partners will follow thorough vetting process to identify the best three candidates who will be administered a leadership profile instrument through WSU. Search team will select the principal/CAO. Governing Board will approve. There are 166 priority tasks associated with the principal/CAO position.	Dr. Lillie Howard (WSU)	Selection – 4/08 Appointment Approved by Governing Board – 5/08
Faculty Selection and Hiring	Once principal/CAO has been selected, faculty job postings will be finalized and released to professional journals/associations, foundations and partner organizations. Four core discipline teachers will be hired along with part-time adjunct staff to support STEM instructional needs. The CAO will lead a search team and a thorough vetting process will be followed to identify the highest quality teachers. Early selection is important as best STEM candidates are hired quickly. Teacher volunteers with expertise from partnering districts will be sought to assist school design activity.	Margy Stevens MCESC/STEM Center and DRSS Principal/CAO	Selection – 5/08 Board Approval – 6/08
Curriculum Development	Curriculum development is underway with priority attention directed to identification of external resources. Principal/CAO and faculty are essential to the curriculum development process and will begin in early spring 2008. Equal attention will be directed to building instructional capacity to deliver the demanding STEM curriculum. There are a minimum of 33 priority tasks identified on the expanded task-timeline for Curriculum/Instruction development.	Dr. Jim Tomlin (WSU) and DRSS Principal/CAO	Board Approval – 4/09
Student Enrollment	Recruitment/admissions plan is being developed and includes a marketing plan, application content, website, student interviews, lottery and waiting list, student record transfer/management. Regional school choice information fairs and promotional opportunities are being identified. STEM Enrichment Program is scheduled for the 08-09 school year in the DRSS facility. Students from Montgomery, Greene, and Clark Counties will be eligible to attend this program that will showcase experiences in STEM fields. Program will build regional interest in DRSS opportunities and provide a "dry run" experience for DRSS staff.	Dr. Brian Boyd (WSU) and DRSS Principal/CAO	STEM Enrichment Program – 9/08 through 5/09 First Class Enrollment Begins – 1/09 Ends – 9/09
Sustainability Plan	Predictable supplemental funding is important. State startup grant money will be leveraged by seeking private and public grant money to further expand DRSS capacity to meet the regional STEM mission. Private sector partners will establish a private foundation dedicated to creating a DRSS endowment. Regular direct solicitation and other promotional activities will be scheduled.	Dr. Lillie Howard (WSU)	Board Approval of Sustainability Plan – 6/08





January 14, 2008

Dr. Julie Schaid Executive Director Partnership for Continued Learning 30 E. Broad St., 36th Floor Columbus, OH 43215

Dear Dr. Schaid:

Consistent with its mission to be a "catalyst for educational excellence in the Miami Valley," Wright State University, in partnership with Wright-Patterson Air Force Base (WPAFB)/Air Force Research Laboratory (AFRL), EDvention (the Miami Valley's P-16 Council), and a strong coalition of local public school districts, career technology centers, business and industry, institutions of higher education, foundations, and others, is strongly committed to the establishment and operation of a Dayton Regional STEM School (DRSS) to meet the learning needs of youth in grades 6-12 who will become high school graduates with the ability to enter a college-level course of study in Science, Technology, Engineering, Mathematics and/or Medicine without need for remediation. DRSS graduates will thus have the ability to succeed and thrive in Ohio's 21st century innovation economy.

Wright State University believes that the Dayton region can best achieve economic vitality by investing in the education of regional youth in the STEM disciplines. To accomplish this, we recognize that it will be necessary to not only create the DRSS, but to work closely with our regional partners, including the National Governor's Association Dayton Regional STEM Center, to disseminate the innovative learning styles and materials created in this school to produce students who will seek higher educational opportunities in the STEM disciplines and who will choose to go to work after graduation in Ohio's growing STEM industries. In particular, this will include WPAFB's cutting edge technology research environment and that of the emerging research companies sprouting up in the region to support the surge in research at WPAFB.

The Dayton Regional STEM School graduates will be well-prepared through a strong and diverse inquiry/project based curriculum that will enable them to demonstrate mastery of rigorous upper-level math, science and technology concepts and mastery of the use of the scientific method and engineering design processes within cooperative learning teams. They will understand how science, technology, engineering and mathematics relate to the real world, including our region, and will be able to apply their understanding of these subjects to open-ended problems; be able to apply what has been learned across disciplines by using knowledge from one subject area to inform, hypothesize and design in others; and be able to work independently as well as in groups to solve problems, understand the nature of technology, and utilize it to improve the quality and efficiency of problem solving.

Dr. Julie Schaid Page 2 January 14, 2008

As a strong indication of its passionate commitment to the establishment of DRSS, Wright State University has made the following initial commitments to make the school a dynamic reality for our region:

- WSU will invest \$500,000 in the start-up phase of the school's development.
- WSU will provide a 12,000 square foot facility adjacent to the campus to house the school in the initial two years.
- WSU will provide school nursing services, psychological services, school counselor services, health services, recreational services, and library support services to the school.
- WSU will coordinate efforts to build a permanent building to house the DRSS.
- WSU will provide information technology support, telecommunications support, classroom instructional support, software, and equipment maintenance support for the school.
- WSU colleges of Liberal Arts, Science and Mathematics, Engineering and Computer Sciences, and Education and Human Services will provide the curricular development support with area school districts and business partners to ensure an innovative STEM education for students.
- WSU will provide access to science and engineering laboratories to support the DRSS curriculum.
- WSU will provide access to the university libraries, both paper and virtual, to support the DRSS
  curriculum.
- WSU will provide access to the fine arts—studios, theater, dance, and music to support the DRSS curriculum.
- WSU will make its dual enrollment, PSEO, and other programs available to DRSS students and strongly
  promote and facilitate student participation in these programs.
- WSU will coordinate regional partners in the dissemination of lessons learned in the development and operations of the DRSS.
- WSU will continue to focus on the preparation of strong math and science educators with specific talents in the STEM disciplines.
- WSU will coordinate efforts to link the DRSS to the economic development goals of the Dayton region.
- WSU will provide appropriate representatives on the DRSS governing board and/or executive advisory council.

Beyond the above, Wright State University is strongly committed to taking the lead in sustaining the school after the initial project period has ended, working particularly with WPAFB/AFRL, the Dayton Chamber of Commerce, EDvention, business and industry partners, including the state of Ohio, and local, state, and national funding agencies. Wright State University is also committed to seamlessly integrating DRSS into the day-to-day fabric and life of the university in ways that will help to make possible and palpable the realization of the state's and region's vision for the school. The Wright State colleges of Liberal Arts, Education and Human Services, Science and Mathematics, Engineering and Computer Science, Nursing and Health, Boonshoft School of Medicine and School of Professional Psychology have already pledged to develop natural curricular and/or clinical linkages with the school, and we would invite our regional higher education partners to do the same. Finally, the university is committed to providing strong permanent university administrative leadership and oversight for the school, with the dean of the College of Education and Human Services assuming this primary responsibility, in partnership with the deans of the colleges of Science and Mathematics, Liberal Arts, and Engineering and Computer Science, and the Office of the Senior Vice President for Curriculum and Instruction.

Dr. Julie Schaid Page 3 January 14, 2008

Wright State University, in partnership with WPAFB/AFRL, the Dayton Chamber of Commerce, EDvention, and scores of other school and business and industry partners, stands ready to create the Dayton Regional STEM School. We, accordingly, look forward to working with our partners to create a world class STEM school of excellence in the Dayton region.

Sincerely,

David R. Hopkins

Dant R. Hopk

cc: Gregory R. Bernhardt, Wright State University DRSS Proposal Contact

### January 14, 2008

Mr. Greg Bernhardt
Dean, College of Education and
Human Services
Wright State University
3640 Colonel Glenn Hwy.
415 Allyn Hall
Dayton, OH 45435



#### Dear Dr. Bernhardt:

The University of Dayton is pleased to support the Dayton Regional STEM School. This is a significant opportunity for higher education institutions and regional school districts to collaborate in the development of a STEM school. During the past five years the University of Dayton along with other regional higher education institutions has been actively exploring innovative ways to deliver college level coursework to prospective college students. The Dayton Early College Academy, one of the first schools of its type in the country and the first early college in Ohio, has received national recognition for its delivery of a college preparatory curriculum to a diverse student population in an urban educational context. It is because of the very innovative approach associated with DECA that the University of Dayton has developed such positive energy about the creation of a regional STEM school. Dayton has demonstrated an ability to create specialized secondary education opportunities that are focused on the very unique learning needs of the young people in this region. We believe that the STEM high school will be a significant and appropriate educational complement to what the University of Dayton has endeavored to accomplish at DECA and what this region needs to achieve relative to the advancement of the STEM disciplines.

One of the real keys to the success of this STEM venture will be the creation of significant educational partnerships between and among all the higher education institutions in this region and, concomitantly, a vital collaborative relationship with the multiple secondary education institutions that populate the Miami Valley. The University of Dayton and other regional higher education institutions have a long history of working closely with secondary schools to develop programs that meet the unique learning needs of the young people, and I am very confident that the proposed STEM school will be another example of a strong educational program emerging out of a variety of significant and vital partnership relationships.

Part of what makes Dayton so uniquely positioned to provide this type of STEM opportunity is the relationship that higher education institutions and secondary schools have with a wide variety of business and corporate partners. This endeavor will be no exception and the partnership will consist of Wright Patterson Air Force Base/Air Force Research Laboratory, Edvention (the Miami Valley's P-16 Council), a variety of public school districts, career technology centers, business and industry partners, and selected foundations.

As a partner, The University of Dayton commits the following resources to the success of this endeavor:

The University of Dayton will promote participation in the development of courses and curricula. The University will identify faculty members who will work in the school and be liaisons to UD (participating as "demonstrators" and "mentors" for students) and local participating school districts.

During the school's first year, the University of Dayton will provide a STEM teaching fellow who will commit 50% of his or her time to the STEM academy. The STEM teaching fellow will be a faculty member with significant expertise in the one of the STEM disciplinary areas and will endeavor to assist in developing curricula and engaging faculty in appropriate professional development opportunities.

The new STEM School will provide an opportunity to establish an enhanced and dynamic relationship with the Dayton Early College Academy and other regional schools so that all educators can learn from each other and leverage each others' strengths in order to deliver higher level STEM instruction.

- The University of Dayton will support grants that fund graduate level students to work in serious ways in K12 classrooms and to bring math, science and other STEM disciplines to life for young learners.
- The Dean of the School of Education and Allied Professions at the University of Dayton
  will serve as a representative to the planning committee for the STEM school. Other
  University of Dayton representatives from the College of Arts & Sciences and School of
  Education and Allied Professions will participate to ensure the success of the proposed
  STEM school.

The University of Dayton in partnership with WPAFB/AFRL, the Dayton Chamber of Commerce, Edvention, Wright State University, selected business and industry partners, and a range of other community groups look forward to the opportunity to create and sustain a Dayton regional STEM high school in the Dayton region and proximate to the Wright State University campus.

Sincerely,

Daniel J. Curran, Ph.D.

Daniel J. Curran

President

University of Dayton

Office of Academic Affairs (937) 376-6431 Fax (937) 376-6445

January 10, 2008

**Gregory Bernhardt** Dean, College of Education and Human Services Wright State University Dayton, OH 45435-0001

#### Dear Dr. Bernhardt:

I write to summarize contributions Central State University can make to the development and ongoing success of the proposed Dayton Regional STEM School.

Consistent with our strategic plan to increase our outreach to and enrollment of Ohio students in the STEM areas, we can offer the following kinds of support to the school:

- After school and weekend tutoring in STEM subjects through our Project Succeed Program, which focuses on strengthening academic skills for elementary and middle school students.
- o Summer enrichment for DRSS students in our W.E.B. DuBois Academy, which provides in-class and field trip experiences in math and science for high school students.
- o Opportunities for DRSS students to present STEM subject research projects at our annual Willie J. Washington Science Symposium.
- Pre-service field work by our math and science teacher education students to support activities at DHSS.
- Offering of guest lectures and demonstrations by CSU STEM faculty.
- Access to STEM labs on our main campus, including hands-on experience with equipment in our manufacturing engineering and water resources labs.

- Enrollment of DRSS students in science and math courses through the PSEO Program at both our main and Dayton campuses.
- Service by a Central State University representative on your governing or advisory boards.

We are excited about the potential of this school to strengthen the learning and achievements of students in our region. We will continue to explore with you other possible links and contributions as the needs and potential of this school emerge.

Best wishes for success in the effort.

Sincerely,

a. Toy Caldwell

A. Toy Caldwell-Colbert

Provost and Vice President for Academic Affairs

Steven Lee Johnson, President

937/512-2525 fax 937/512-4596



January 10, 2008

Dr. Greg Bernhardt Dean, College of Education and Human Services Wright State University 3640 Colonel Glenn Hwy. 415 Allyn Hall Dayton, OH 45435

Dear Dr. Bernhardt:

Sinclair Community College is pleased to support the Dayton Regional STEM School. As the greater Dayton area economy is retooled, the future workforce will require mastery of the STEM disciplines. The new school will be a major player in developing the people needed to ensure a bright economic future for the Dayton region.

As a partner, Sinclair will draw upon its major assets to support the Dayton Regional STEM School. First, the Miami Valley Tech Prep Consortium is a source of expertise for STEM teacher professional development and summer externships, curriculum alignment for grades 11 – 14, as well as motivating STEM-related student competitions. Second, Sinclair's National Center for Manufacturing Education is a national clearinghouse for innovative, field-tested curriculum products which will be made available to the new STEM school. Third, Sinclair administers Project Lead the Way for the state of Ohio offering inventive, pre-college engineering curricula and teacher development programming. With National Science Foundation funding in partnership with Wright State University, Sinclair is developing model courses to improve the retention of STEM students. The lessons learned at the community college level will have application for student success in the STEM school. Finally, based upon experience with the Dayton Early College Academy managed by the University of Dayton, Sinclair can provide assistance with any remediation of basic skills required by students entering the STEM school.

We are pleased to work with EDvention and Wright State University in the development of the Dayton Regional STEM School.

Sincerely,

Steven Lee Johnson, Ph.D.

President and Chief Executive Officer

Your levy support quarantees quality and affordability.



January 15, 2008

RE: Letter of Support for Dayton Regional STEM School Proposal

It is my pleasure to endorse wholeheartedly on behalf of Clark State Community College the Dayton Regional STEM School (DRSS). The Dayton region has a long history of partnership and innovation. Starting a STEM School is another example of both innovation and partnership. The region needs the DRSS School to help link workforce and economic development initiatives through the development of curriculum and educators in STEM fields.

Toward the DRSS School, Clark State Community College (CSCC) will contribute in five areas: facilities provision, faculty involvement, research incubation, distance learning expertise, and workforce mentoring.

- 1) Facilities. CSCC has a new facility located in close proximity to the proposed location of the STEM School. To allow the school to launch with ease and to provide extra space when the a permanent facility is opened, CSCC will make available its science and computer labs, meeting rooms, and other needed parts of its Greene Center facility located on 3775 Pentagon Road. With a value of \$110.00 per day and expected 8 days usage per month, the annual value of facilities provision for the DRSS is \$10,560.
- 2) Faculty. CSCC's faculty members are experts in teaching across a spectrum of STEM subjects to diverse student populations in applied areas for employment skill development. The DRSS curriculum calls for these areas of expertise. In support of the School, CSCC will involve its faculty with teachers of the DRSS School to share pedagogy. Toward this end, CSCC will contribute 100 hours of faculty time per year with an approximate value of \$5,000.
- 3) Research. CSCC campuses offer research and laboratory settings for DRSS faculty to test teaching methods, practice class pedagogy, and gather long-term evidence of learning. CSCC values its classrooms at \$55.00 per day. If classrooms are used 24 days per year for research, the value of this contribution is \$1,320.
- 4) Distance Learning. CSCC has a strong, viable distance learning program that includes interface between the sciences and laboratories. Indeed, one its faculty members recently won an award for developing a laboratory-based science skill program and related courses online. Leveraging CSCC's expertise, facilities, and support in distance learning will allow students not only enrolled at the DRSS but across the state to take DRSS courses. CSCC will contribute the usage of its computer labs and support services to enable such. At a value of \$110.00 per day for facilities and \$50.00 per hour for support services, the expected contribution for distance learning to DRSS is \$5,500 for facilities (one day per week for 50 weeks) and \$1,000 for support (20 hours per year) totaling \$6,500 for CSCC's contribution to distance learning.

Dayton Regional STEM School Proposal Page 2 January 15, 2008

5) Workforce Mentoring. CSCC is focused not only on training the high school graduate but is also focused on training the adult learner. Re-tooled adult learners are passionate community leaders. Through the DRSS, there is not only an opportunity to train adolescents but there is also the opportunity to train adults in targeted STEM areas and use re-tooled adults for leading curriculum development, mentoring, teaching, and special projects. Linking the conduit of adolescent and adult learners is a specialty of community colleges. CSCC is committed to continuing its community college tradition of linking learning with workforce and economic development for all learners. It will focus 40 hours of its human resources from its corporate and community services and career management divisions every year. Valued at \$50.00 per hour, workforce mentoring is worth \$2,000 per year to the DRSS as a conduit between businesses, industries, and adolescent and adult learners.

Together, Clark State Community College pledges \$25,380 in resources annually to the DRSS. Additionally, it pledges continued resourcefulness to regional collaborative efforts between educational, business, and governmental entities. The DRSS will help propel Ohio into the next generation of competitive innovation for which the Dayton region is historically known.

Sincerely,

Karen E. Rafinski, Ph.D.

Jaren E. Rajinski

President



January 17, 2008

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001

#### Dear Greg:

EDvention is a collaborative founded in 2007 with the mission of accelerating science, technology, engineering and math talent development across the preschool through work, early care & education providers as well as business and economic development are all represented. As the umbrella organization for STEM education, EDvention works to identify opportunities and needs for STEM programming, as well as facilitate gaining resources to accomplish the work. EDvention is also the home of the Dayton Regional STEM Center, funded through a grant from the National Governors Association to develop innovative STEM curriculum and support STEM education leadership.

Before the Dayton Regional STEM School proposal was developed, EDvention staff monitored the state budget process, analyzed the STEM legislation and worked with regional representatives to determine whether our region would benefit from establishing such a school. When there was sufficient interest, and it was clear how this new school could provide benefits to both the students who attend it as well as students and teachers throughout the region, EDvention facilitated meetings of interested parties until a cutting edge approach emerged and partners made commitments to the work. EDvention is now pleased to fully support and participate in the development of the Dayton Regional STEM School that will be hosted by Wright State University and anchored in the Air Force Research Laboratories located at Wright Patterson Air Force Base. We believe that the approach being adopted – one of full scale collaboration with multiple higher education, K12 and business/government partners – will bring strength to the educational program and provide a strong foundation for sustainability for the school itself.

#### EDvention and the Dayton Regional STEM Center will:

- Bring additional partner resources to the work of the DRSS. EDvention has already played a
  convening role in the development of the school, as well as matched specific businesses with the
  DRSS. EDvention will continue to play this role.
- Assist the DRSS in identifying and securing grant funded resources (public & private) through the
  development of collaborative proposals with EDvention, the Dayton Regional STEM Center and
  others.
- Systemically link the DRSS with other schools in the region through the "Portfolio Approach to STEM Education" adopted by the EDvention Board. This approach advocates for supporting STEM education efforts in schools throughout the Dayton Region and networking these schools together to learn from each other. This will happen largely through the Dayton Regional STEM Center. The STEM Center is governed by the EDvention Board and fiscally managed by the Montgomery County Educational Service Center.
- Provide innovative curriculum jointly developed by teams of STEM Fellows (P12, higher education and industry) as well as professional development, coaching and support for STEM School educators.
- Disseminate lessons learned throughout the region and beyond through web based means, submission of written articles to publications and presentations at appropriate conferences and to interested groups.
- Ensure that the full regional strategy for STEM talent development considers the needs and contributions of the DRSS as a core part of the Dayton Region's efforts. EDvention will provide

- open communication to and with the DRSS board and personnel as to STEM activities and opportunities within the region.
- Organize a public awareness and engagement campaign emphasizing the importance of strong STEM learning. This work will benefit the STEM School as they work to recruit students to the inaugural class.

Personnel services that support the above work are in excess of \$100,000. In addition, we expect the public awareness and engagement campaign that will bring additional funds to the effort will support the school as well as other regional STEM projects.

EDvention stands ready to continue support of the Dayton Regional STEM School throughout its development and implementation. We are grateful to Wright State University and the Air Force Research Laboratories at Wright Patterson Air Force Base for providing significant leadership on the project, and to the supporting partners such as the University of Dayton, Inventis Group, Standard Register and engaged school districts.

Thank you for the opportunity to participate in this critical work.

Sincerely,

Susan R. Bodary Executive Director





1 Chamber Plaza Fifth and Main Streets Dayton, Ohio 45402-2400 P: 937.226.1444 F: 937.226.8254 www.daytonchamber.org

January 8, 2008

Dr. Greg Bernhardt Dean of Education and Human Services Wright State University Fairborn, Ohio 45435-0001

Dear Dr. Bernhardt

I write to express the strong and enthusiastic support of the Dayton Area Chamber of Commerce for the request for proposal being submitted for the Dayton Regional S.T.E.M. School. The Dayton Area Chamber of Commerce endorses the mission of this collaborative proposal to start a S.T.E.M. high school in the Dayton region that will help in ensuring that S.T.E.M. high school students graduate with rigorous and relevant academic and practical preparation.

This increased talent in the core S.T.E.M. subject areas will help address the growing workforce needs of the Dayton region's transitioning economy. As the Dayton area business community transitions from a manufacturing based economy, to an economy rooted in science and technology, our employers are struggling to find employees with the appropriate skills, education and experience necessary for employment. A S.T.E.M. high school in the Dayton region will help prepare students for the changing needs of our economy, while ultimately assist in filling the workforce gaps in the Dayton region's business community and the State of Ohio.

As the business organization partner for the Dayton Region STEM School, the Dayton Area Chamber of Commerce has identified direct staff support, consulting support, marketing support and advocacy support to assist in the start-up costs of this school. To this end, the Dayton Area Chamber of Commerce has dedicated over \$80,000 of in-kind and direct financial resources to ensure that the Dayton region obtains a S.T.E.M. high school. The Chamber's staff and board of directors have fully endorsed this proposal and are committed to seeing a S.T.E.M. high school in the Dayton region come to fruition.

The Chamber looks forward to continuing our dedication to the Dayton Region S.T.E.M. School long after the school is committed and built. The Chamber strongly believes that ensuring a proper education for our students in the vital S.T.E.M. subject areas, is essential to our region's future economic growth and workforce development.

Thank you for your commitment to education and I look forward to continuing our partnership

for S.T.E.M.

Sincerel

hillip L. Parker, CAE, CCE

esident & CEO

#### GREENE COUNTY CAREER CENTER

2960 West Enon Road Xenia, Ohio 45385-9545 937-372-6941 or 426-6636 FAX 937-372-8283



January 9, 2008

Dr. Gregory R. Bernhardt, Dean College of Education and Human Services Wright State University 3640 Colonel Glenn Highway Dayton, OH 45435

Dear Dr. Bernhardt:

It is with great enthusiasm that the Greene County Career Center commits to being a partner in the design process of the Dayton Regional STEM School (DRSS). An opportunity such as this does not happen often, and we are willing to fully contribute expertise and resources to the planning and operation of the school. We are confident that both the STEM school and the Career Center will benefit greatly from this partnership.

Career-technical schools have a rich history in preparing students to enter the workforce. Technology and our global economy have changed the skill set students need to succeed in today's job market and to be prepared for jobs of the future. All students need advanced education beyond high school. As a result, the mission of career-technical schools has expanded to prepare students for **both** careers and college.

We achieve this mission successfully through the integration of technical and academic studies in a project-based learning environment. Students have a solid academic foundation and can apply knowledge to real-world situations. Business advisory committees help us develop curriculum, select equipment, design facilities, and provide real-world problems. Committee members and other business partners offer job shadowing, mentorship, and internship opportunities for students.

The Career Center has technology ranging from state-of-the art computer labs to specialized technology designed for specific workplace applications. Our facilities differ from most comprehensive schools; we have many laboratories throughout the building that are designed to simulate a wide variety of career environments.

Based on the expertise and resources described above, the Greene County Career Center will provide up to \$100,000 of in-kind services for the design and operation of the DRSS. These services include:

 Provide teachers to: develop curriculum that integrates academic and technical coursework, deliver professional development to STEM faculty on how to effectively deliver project-based instruction, and loan career-technical and academic teachers to work side by side with STEM teachers in the classroom to apply learning to real-world situations.

- Share our laboratories and equipment for unique learning experiences. STEM students can also work closely with our students and receive peer-to-peer instruction in a variety of career areas. Greene County Career Center is located in close proximity to the proposed DRSS location.
- Link the STEM school with our business partners to provide students with onthe-job experiences and mentors and provide teachers with real-world problems and projects.
- 4. Share marketing and communications expertise for advertising and recruiting campaigns. We have a wealth of experience in these areas.
- 5. Appoint a member from the Greene County Career Center to participate as a member of the DRSS governing board. As superintendent, I am willing to assume this role.

Greene County Career Center is committed to providing high-quality learning experiences for all students each and every day. We can only accomplish this by continuing to learn from students, other teachers, businesses, and the community. A strong partnership with DRSS will increase our capacity for learning as follows: new professional development opportunities, team teaching with others outside our building, exposure to research being done by institutions of higher learning, and working with STEM students from a nontraditional educational environment. We will also be in a better position to partner with more technology- and scientific-based companies in the area along with the Air Force Research Lab. Students enrolled in our Teacher Prep Academy (high school seniors who plan to pursue careers in education) can have the unique opportunity to serve internships with DRSS thereby better preparing them to serve their students when they become teachers.

Dr. Bernhardt, thank you for this special opportunity to be a partner in the development of a regional STEM school; this is such an exciting venture. Through the efforts of many committed partners, we can **and will** make this vision a reality.

Sincerely

Marsha K. Leonard Superintendent

marshe X. Loverd

## Greene County Educ Ational Service Center

360 East Enon Road • Yellow Springs, Ohio 45387-1499 (937) 767-1303 Fax: 767-1025 1-888-947-3363 www.greene.k12.oh.us

January 9, 2008

Terry A. Thomas, Superintendent Robert L. Arledge Jr., Treasurer

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001

Dear Dr. Bernhardt:

The Greene County Educational Service Center has agreed to partner in the Dayton Regional STEM School (DRSS). I am writing to share our excitement and enthusiasm for this commitment to the regional collaborative working to establish the school.

The Greene County ESC has an excellent working relationship with each of the 7 public school districts and Career Center in Greene County. Through this relationship we can be a valuable resource as a liaison linking the goals and activities of the DRSS with each of these Districts and their instructional staff and students. In addition, the Greene County ESC employs staff possessing a very high level of expertise in providing quality training for teachers. As an example, my staff is actively involved with the Ohio Department of Education and Battelle for Kids in helping to design and carry out training with both the D3A2 project and how to use data as associated with the Value Added data project. As the DRSS design process moves forward and additional specific resource needs are identified, the Greene County ESC will work enthusiastically with the school design team to identify the appropriate individuals, roles and other opportunities for input into the school design process.

In addition to the above commitment to fully participate in the school design process, we are committed to work with each of County school districts in order to provide Greene County students with opportunities to enroll and our educators teaching experience through the school once it commences operations. The Greene County ESC is continually working with our school districts to bring best practice experiences and knowledge so that it may be translated into the expected norm with each and every classroom in our County. I am excited about what can be learned from the DRSS project, the training it will provide to our instructional staff, and the educational opportunities being made available to our students.

To support the DRSS, the Greene County ESC is committed to providing up to \$100,000 in direct and indirect resources throughout the design process, the planning, and ongoing implementation of this project. We are in it for the long haul and we recognize this support may involve ESC staff to assist in the school design process and/or other direct financial support used to secure the expertise and support necessary to make this school a total success. In addition, I would be willing to serve as a member or assign other appropriate personnel to serve as members of the DRSS governing authority.

I believe the Dayton area including Greene County offers a high level of technological expertise and a sense of collaboration that will make the Dayton Regional STEM School one of the most successful in the state. Thank you for your efforts and leadership in this project and for allowing us to join you as one of the partners in such an exciting venture which has the possibility to do much in the transformation of education for the future.

Sincerely,

Terry A. Thomas

Superintendent



### **Huber Heights City School District**

5954 Longford Road Δ Huber Heights, Ohio 45424 Δ Telephone (937) 237-6300 Δ FAX (937) 237-6307

Superintendent: William E. Kirby
Assistant Superintendent for Pupil Personnel: Anthony Orr
Assistant Superintendent for Instruction: Cheryl Dale

January 8, 2008

Dr. Gregory R. Bernhardt, Dean Wright State University College of Education and Human Services 3640 Colonel Glenn Hwy. Dayton, OH 45435-0001

Dear Dr. Bernhardt:

It is with great pleasure that I write a commitment letter to the Dayton Regional STEM School. Huber Heights City School District is located adjacent to Wright Patterson Air Force Base and the City of Dayton. The entire area is reeling from a high number of job losses associated with the auto industry. Our high unemployment rate is occurring at the same time that a number of high technical businesses are springing up. Many are associated with future development and expansion at Wright Patterson Air Force Base. Our students need to be better prepared to pursue careers in math, science, technology and engineering. Our School Board has publicly committed additional funds for technology to expand upon opportunities for students and staff. We have moved to paperless School Board meetings to model the use of technology for our school community. We have received a grant this school year from the Ohio Department of Education to organize and plan the implementation of Project Lead The Way in our middle schools and Wayne High School next school year. We are in the process of revising our curriculum and class offerings to provide this valuable opportunity to our students. We have students that are capable of achieving at high levels in the areas of math and science. These same students need to be better prepared for the opportunities available in the job market for engineering and technology.

Huber Heights City School District is committed to supporting the planned STEM School in the Dayton area. I believe our Miami Valley area is poised to become a leading employer in the areas of engineering and technology. Our students are more likely to remain in the State of Ohio if they are better prepared to pursue specific skill levels in higher education in our State. Our developing model of a Regional STEM School includes opportunities for the advancement of cutting edge engineering and technology experiences for our students and staff. Huber Heights City School district will commit funding for staff development activities emanating from the model programs developed at our STEM School. Our staff will benefit from learning about lessons that motivate students to be better learners. Our students will benefit from the opportunity to experience a STEM education. Our total in-kind commitment, to include curriculum development, staff development, teacher exchanges and student's enrolled in the STEM School is up to \$100,000 in support of the STEM School initiative. The STEM School will be of great benefit to our students, staff and school community.

I am willing to serve on the governing board of the proposed Regional STEM School. I will encourage staff to participate in the many growth opportunities the Dayton Regional STEM School would bring to us.

Sincerely.

William E. Kirbv



January 9, 2008

Dr. Gregory R. Bernhardt Dean, College of Education and Human Services Wright State University 3640 Colonel Glenn Highway Dayton, Ohio 45435

#### Dear Dr. Bernhardt:

The Montgomery County Educational Service Center (MCESC) is excited to be in partnership with Wright State University on the development and implementation of the proposed Dayton Regional STEM School (DRSS). The development and implementation of such a school fits three specific MCESC goals: to provide inservice opportunities to math and science teachers; to improve student achievement in math and science; and to offer more direct instructional activities to students.

The MCESC will provide up to \$100,000 to this planning effort in fees for consultants, planning costs, and in kind services from MCESC staff. While there are many ways the MCESC will partner with WSU in this endeavor, let me outline at least three specific ways MCESC can further this effort:

One, the MCESC is the fiscal agent for a National Governors' Association grant of \$500,000 for the current and next fiscal year to be used to help fund a STEM Center. This STEM Center is designed to construct teams, consisting of classroom teachers paired with private sector scientists and higher education professors in math and science, to develop interdisciplinary, inquiry based, science lab related, and hands-on classroom activities to spur more student interest and higher student achievement in math and science.

Initially, the STEM Center will be mapped to three areas: propulsion, sensors, and advanced manufacturing technologies. There are plans to expand in other areas, the first of which will be human effectiveness and medicine. The MCESC will meld DRSS and STEM Center teacher training activities to effect cost and human resource efficiencies.

Two, the MCESC is the fiscal agent for two Ohio Core grants to increase the number of available math and science teachers by providing private sector employed engineers, mathematicians, and scientists with an opportunity to earn a teaching license in their field of expertise. The MCESC partners with Wright State University for training prospective biology, chemistry, and physics teachers and the University of Dayton for training prospective math teachers. The MCESC certainly will provide coordination and mentoring services for these prospective teachers through the DRSS planning and implementation process.

Dr. Gregory R. Bernhardt Page 2 January 9, 2008

Three, the MCESC is the regional fiscal agent for Region 10 which includes Darke, Preble, Miami, Greene, Clark, and Montgomery counties. As fiscal agent, the MCESC is in a position to facilitate communication and cooperation among WSU, its DRSS partners, and the local school districts in Region 10.

Greg, the Montgomery County Educational Service Center is committed to be a working partner with Wright State University in planning and implementing the Dayton Regional STEM School (DRSS). The MCESC is deeply involved in the above mentioned STEM activities, and can provide a coordination function with DRSS to meld together current STEM activities with the DRSS project.

Respectfully,

Frank DePalma

Frank DePalma

Superintendent

psz



P.O. Box 223 Miamisburg, OH 45343-0223 (P)937.865.4481 • (F)937.865.3680 • larrydosser@mlpc.com • www.mlpc.com

January 7, 2008

Dr. Greg Bernhardt Dean of Education Wright State University 3640 Colonel Glenn Highway Fairborn, OH 45435-0001

#### Dear Dr. Bernhardt:

As a technology-based company Mound Laser & Photonics Center, Inc. (MLPC) requires persons that are skilled in science, engineering, and math. Persons on our technical staff have degrees in chemistry, physics, electrical engineering, mechanical engineering, computer science. MLPC hires co-op students in these disciplines and trains them through an active apprentice program in laser materials processing on state-of-the-art equipment and real-world problems and projects. Many of the students are hired upon graduation, which keeps them in Ohio.

Education is a cornerstone of MLPC and the continuing decrease in students entering these disciplines is of great concern to the future of this company. In the short term we can find students to meet our requirements from Sinclair Community College, Wright State University, and the University of Dayton. However, we must reach out to students at the elementary level to ensure the availability of personnel. This is the reason that we are strongly supporting the STEM school in Dayton.

I am currently serving on the EDvention board and the STEM Center Advisory Council. In addition two persons from MLPC have volunteered to support these efforts as well. In addition to the time commitment of MLPC personnel, if the company has additional equipment that is suitable to for the STEM school we will donate that as well. I estimate these in-kind volunteer efforts and equipment to be valued at approximately \$25K per year.

MLPC would also like to explore the possibility of engaging both students in teachers in sessions that illustrate the new concepts of advanced manufacturing and their associated careers. I believe that this is ultimately the best way to introduce our technology and would effectively double our in-kind contribution to approximately \$50K per year.

Best regards,

Dr. Larry R. Dosser President & CEO

Farry R. Dosser



6800 Hoke Road • Clayton, Ohio 45315-9740 937/837-7781 • Fax 937/837-5318 www.mvctc.com

January 8, 2008

Dr. Julie Schaid Executive Director Partnership for Continued Learning 30 E. Broad St., 36<sup>th</sup> Floor Columbus, OH 43215

Dear Dr. Schaid:

Wright State University in combination with a strong regional partnership of public local school districts, career technical centers, business, Wright Patterson Air Force Base (WPAFB), institutions of higher education, EDvention (Miami Valley's P-16 Council), foundations and others are committed to the establishment and operation of a Dayton Region STEM High School to meet the learning needs of youth who will produce high school graduates who have the ability to enter a college-level course of study in Science, Technology, Engineering and Math without need for remediation and who have the ability to succeed in a 21<sup>st</sup> century innovation economy.

The Miami Valley Career Technology Center (MVCTC) is known for its commitment to building a strong economic base through educating a workforce possessing those skills necessary to attract and maintain business in the Miami Valley. The Dayton Regional STEM School (DRSS) would give students considered to be in the middle majority, another choice to strengthen their math and science skills through the integration of disciplines combined with contextual relevance. Creating an intellectual capacity in the Miami Valley is critical to our future and the DRSS is another educational delivery system that would support this goal. The opportunity to design a school using the 21<sup>st</sup> Literacy Skills and to foster the movement of student learning into Quadrant D of the Knowledge Taxonomy (see attachment), are also reasons why this Miami Valley initiative is supported by the Miami Valley Career Technology Center.

The Dayton Regional STEM School (DRSS) will produce high school graduates who possess a solid academic foundation through participation in a strong and diverse inquiry/project based curriculum. STEM Academy students will be required to demonstrate mastery of rigorous upper-level math, science and technology courses and will master the use of the scientific method and engineering design process within cooperative learning teams. They will understand how science, technology and mathematics relate to the real-world and our region and will be able to apply their understanding of these subjects to open-ended problems. Our graduates will be able to apply what has been learned across disciplines by using knowledge from one subject area to inform, hypothesize and design in others. They will be able to work independently as well as in groups to solve problems and will understand the nature of technology, utilizing it to improve the quality and efficiency of problem solving.

The Miami Valley Career Technology Center will commit to a partnership through offering a staff member as a STEM fellow in the development of curriculum, use our expertise in career technical pathways to assist in identifying areas of relevance, and offer experiences gained through the defining and development of STEM on the MVCTC campus. The MVCTC has staff that brings both educational delivery expertise in the area of STEM and real world experiences.

In addition, MVCTC will commit to a person to sit on one or more of the governing boards so that experiences can be shared and learning from these past scenarios will enhance the development process of the DRSS.

The professional development opportunities received by the MVCTC staff in the areas of Inquiry Based Learning (IBL), Collins Writing, Tovani Adolescent Reading strategies, and MAX Teaching techniques will be shared with the DRSS personnel. Other areas of professional development may be in the areas of technology integration such as white boards, podcasting, content manager software, and the Microsoft Office Suite. Partnering MVCTC and DRSS instructors is another way MVCTC and DRSS can create a collaborative design and an exchange of learning for students.

MVCTC will offer space to the DRSS on the MVCTC Blackboard framework. DRSS would use their staff to design a flexible and personalized system to support educational content that meets the needs of both staff and students. This content manager would also support the 21<sup>st</sup> Century Literacy recommendations.

Through partnering in the areas of staff, students, content, and professional development, best practices will surface and more students in the Miami Valley will benefit from the collaborative efforts. Staff working together and maintaining what is in the best interest of the student will remove attitudes of competition and will open the doors for exchanges with staff and students. Students working together, collectively bringing their strengths will create learning that parallels the global landscape where our students will be working to solve problems.

Sincerely,

John A. Boggess, Ph.D./

Superintendent

Cc

Gregory R. Bernhardt, Wright State University

Susan Bodary, Edvention



Managing the documents you can't live without

January 4, 2008

Dr. Gregory R. Bernhardt College of Education and Humanities Wright State University, Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001

Dear Dr. Bernhardt;

Standard Register (SR) is an industry-leading document services provider with headquarters in Dayton, Ohio. Our company possesses nearly a century of industry expertise that helps organizations increase efficiency, reduce costs, mitigate risks, grow revenue and meet the challenges of globalization. We provide consulting, technology, design, printing and staffing services to over 14,000 companies.

I am writing to express our support and commitment to the Dayton Regional STEM School (DRSS). SR is committed to supporting the DRSS partnership by assisting with the organizational and operational design of the school, specifically as it relates to workflow, the utilization of information technology and business practices. SR will also design the school business systems and functions and forms for reporting on school operations. Furthermore, we are willing to join DRSS partners in grant-writing and fundraising efforts.

In addition to the aforementioned organizational management support, SR will also assist the DRSS to develop a process engineering curriculum module and a pre-media- through-presentation process for DRSS students that will support the teaching of presentations and documentation skills, instructing students regarding the communications and defense of their work through verbal and technological media. The process engineering curriculum module will be designed to be integrated into major classroom assignments.

Finally, SR will develop a portfolio management system to document student work in a manner that will assist them with planning for post-secondary opportunities.

We are very excited about the opportunity to contribute to the success of the DRSS and to help students in our community reach their potential in STEM disciplines. We estimate that the overall dollar value for the outlined services to be \$150,000 through startup and approximately \$50,000 annually thereafter.

Sincerely,

Dennis Rediker

President & Chief Executive Officer

Tom Furey

Chief Supply Chain Officer

## West Carrollton School District

430 E. Pease Ave., West Carrollton, Ohio 45449

Phone 937-859-5121

Fax 937-859-5250

www.westcarrolltonschools.com

January 9, 2008

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, OH 45435-0001

Dear Dr. Bernhardt:

The West Carrollton City School District is excited and proud to partner in the Dayton Regional STEM School initiative. Our district has put together long-term partnerships with institutions of higher education, business, government, and community agencies, and we are writing to share our commitment to the regional collaborative working to establish this school. We are convinced this innovative project will contribute significantly to the economic and educational vitality of the entire region, and we are positioned to make a full and long-term commitment to its success.

We are very excited about the dynamic opportunities the DRSS will provide our students and staff. As a founding partner in the DRSS project, the West Carrollton School District is eager to share its expertise in the STEM disciplines, school operations, and organizational leadership. We understand that the design of the DRSS will evolve over time and are willing and prepared to demonstrate flexibility and support as specific needs and resources are identified. Moreover, we recognize the tremendous opportunity the DRSS presents to continue our organizational learning through best practice, collaboration, and discovery.

As a school district, our deepest commitment is to providing all of our students with opportunities for educational success. We firmly believe the DRSS represents a unique opportunity to boost the capacity of our existing system of education by accelerating student achievement and positioning students for future success. We know this commitment to our students is right because it prevails upon us to create a system of academic excellence that will promote creative and innovative thinking for a generation that will live with rapid social and economic change.

To support the DRSS, the West Carrollton School District is committed to providing up to \$100,000 in direct or indirect resources during the planning period. We know this support may be in the form of staff assigned to participate in the school design process and/or direct financial support used to secure the expertise or other resources necessary to ensure the success of the school. Further, we understand the district may assign any one of us to serve as a member of the DRSS governing authority.

Finally, we want to express to you in the most sincere way possible that we believe the creation of the DRSS is completely congruent with our Core Values of Improvement, Learning, Leadership, Value, and Results. We believe fully that regional systemic efforts based on collaboration are the most effective way to ensure that all our children develop the skills and knowledge necessary to be successful, and we want to contribute fully in this partnership with grace and integrity.

Sincerely

Rusty Clifford, Ph.D. Superintendent

Larry Campbell, Ph.D. Asst. Superintendent

HR & Sec. Curriculum

Melissa Theis

Elem. Principal Spec. Education

Gifted Supervisor

Fred Gehron WCHS Principal

COMMUNITY

Elem. Curriculum

Monica Butcher



Superintendent Rusty Clifford, Ph.D. . Treasurer Ryan Slone Assistant Superintendent Lawrence Campbell, Ph.D. ♦ Business Manager Dana Green

**Board of Education Members** 

Debbie Bobbitt ♦ Pamela Gillette ♦ Doug Hess ♦ Leslie Miller ♦ Tom Wolf



578 E. Market Street • Xenia, Ohio 45385 Phone: 937-376-2961 • Fax: 937-372-4701

www.xenia.k12.oh.us

Dr. Jeffrey K. Lewis Superintendent Dr. O. Randolph Overbeck Assistant Superintendent Edward A. Stidham Director of Personnel

Gretchen Rives Administrative Assistant Rosalie Townsend, CPA Treasurer

January 8, 2008

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean 3640 Colonel Glenn Highway Dayton, Ohio 45345-001

Dear Dr. Bernhardt.

After studying the parameters of the Dayton Regional STEM School or DRSS, I am very impressed by potential of this undertaking and by the commitment of Wright State University to this effort. Xenia Community Schools is very interested in DRSS and on behalf of our Board, I am pledging our commitment to this collaboration to create a school that supports the key tenets of this unique educational endeavor.

Xenia is a diverse community that includes a small city surrounded by rural Greene County. The district is 130 square miles and includes the county seat of government. Because of our diversity and percentage of students at a poverty level (approximately 47%), we believe the DRSS initiative will be a boon for the staff, community and, most of all, for our students. As a primary contributor to the planning phases, we will assign staff and administrators to its creation. With that skill and experience, the design process will ensure a school that serves the needs of Xenia and embodies the goals of DRSS. In short, the creation of the school's design is critical to its success and sustained life; we want to be active in this important phase.

Xenia Schools will also commit to encouraging opportunities to students and staff to engage in the school in direct and indirect ways. Learning from the experiences and programs at DRSS will fuel programs and techniques in the home district. We will provide indirect resources during the planning period; these will include, but not be limited to, staff assignment to the planning process and providing in-kind services, as

needed. In addition, either a delegate or I will be willing to sit on the DRSS Governing Board.

The pursuit of a STEM School is exciting. We appreciate the leadership of Wright State University in this process and thank you for including Xenia Community Schools as a part of your partnership team.

Sincerely,

Jeffrey K. Lewis, Ed.D.
Superintendent of Schools

Cc: Board of Education

Dr. O. Randy Overbeck, Assistant Superintendent



# DEPARTMENT OF THE AIR FORCE AIR FORCE RESEARCH LABORATORY WRIGHT-PATTERSON AIR FORCE BASE OHIO

0 9 JAN 2008

MEMORANDUM FOR Dr Julie Schaid, Executive Director Partnership for Continued Learning 30 E. Broad St. 36th Floor Columbus, OH 43215

FROM: AFRL/CA

Building 15, Room 225 1864 Fourth Street Wright-Patterson AFB, OH 45433

Subject: Air Force Research Laboratory Commitment to Science, Technology, Engineering and Mathematics Education

The Air Force Research Laboratory (AFRL) is headquartered at Wright-Patterson Air Force Base just north of Dayton Ohio. The laboratory conducts the necessary basic, advanced and applied research to provide the US Air Force with the capabilities it requires to fly, fight, and win.

The laboratory is organized in nine major technology areas organized as Directorates and the Air Force Office of Scientific Research. These areas are; Human Effectiveness, Propulsion, Sensors, Air Vehicles, Materials and Manufacturing, Information, Directed Energy, and Munitions. Of the nine Directorates, five are located at Wright-Patterson AFB. The AFRL employs around 9,000 people of which close to 3,500 are scientists and engineers. The Laboratory executes a yearly research budget of close to \$2 Billion dollars.

As a community member the AFRL is the main supporter of the Wright-Patterson AFB Educational Outreach Office, which facilitates base wide involvement with the local educational community, focusing on K-12 for all fields of Math, Science, Technology, Aviation and Aerospace. Additionally, the AFRL is actively engaged in educational partnerships with higher educational institutions across the region and the State.

The AFRL is excited about the possibility of the Wright State University lead team to bring resources to the Dayton region to develop and establish the Dayton Region STEM School. AFRL is proud to be a partner in the effort to increase the number of young Americans pursuing STEM degrees.

The AFRL plans to support the Dayton Region STEM School by establishing an Educational Partnership Agreement with Wright State University and other educational

institutions that are members of the proposal team. The laboratory will make use of the 10 USC 2194 authorities to establish partnerships that will allow the AFRL to:

Make laboratory personnel available to teach and/or assist in science/math course development

Involve faculty and students in defense laboratory research projects

Provide academic/career advice and assistance to students (Mentorship)

Donated surplus Scientific Equipment and Computers

The AFRL looks forward to working with Wright State University and the Dayton region partners to make the Dayton Region STEM School a positive and rewarding experience for students from across the region.

JOE SCIABICA, SES Executive Director



# Fairborn City Schools

306 E. Whittier Avenue, Fairborn, Ohio 45324 (937) 878-3961 Fax (937) 879-8180 Email: <a href="mailto:boe@fairborn.k12.oh.us">boe@fairborn.k12.oh.us</a>

David Scarberry Superintendent Tammy Emrick, C.P.A. Treasurer C.F.O. Gary Walker Student Services Certified Personnel Michael Pittman Curriculum and Instruction

Ed Gibbons Business Affairs Classified Personnel

January 9, 2008

Dr. Gregory R. Bernhardt Wright State University College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001

Dear Dr. Bernhardt:

The Fairborn City School District has agreed to partner in the Dayton Regional STEM School (DRSS). I am writing to share our commitment to the regional collaborative on working to establish this school.

We are very excited about the opportunities the DRSS will provide our students and teachers. As one of the anchoring school district partners for the school, Fairborn City Schools will participate in the planning process by assigning staff with experience in teaching in STEM disciplines and school operations. We believe that this regional effort will provide new and unique opportunities for our students, staff, and community. We also believe the implementation of the DRSS will enhance the ongoing partnership between Fairborn City Schools and Wright State University. This new phase of the partnership will serve to foster a culture of professional growth – support collegial reflection, dialogue, collaboration, and team building that enhances student achievement. The DRSS will also stimulate and re-vitalize district professional development, curriculum coordination, technology, and leadership opportunities. The combined effort of these initiatives will ensure that the DRSS is operationally sustainable.

As the school design process moves forward and additional specific resource needs are identified, we will work with the school design team to identify the appropriate individuals, roles, and other opportunities for input into the school design process.

In addition to our commitment to fully participate in the school design process, we are committed to providing our students opportunities to enroll and our educators teaching experience through the school once it commences operations. We expect to learn a great deal from the DRSS that may be translated into best practices for use throughout our district.

To support the DRSS, Fairborn City School District is committed to providing up to \$100,000 in direct and indirect resources during the planning period. This support may be in the form of staff assigned to participate in the school design process and/or direct financial support used to secure the expertise or other resources necessary to ensure the success of the school.

The school district is willing to appropriate representatives of the district to serve as members of the DRSS governing authority and planning committees.

Finally, on behalf of the students, faculty, staff, administration and Board of Education, I would like to state that the Fairborn City School District is fully committed to the development and success of the Dayton Regional STEM School (DRSS).

Thank you for your efforts. I look forward to the important work ahead.

Sincerely,

Dave Scarberry

Dove Scaleny

Superintendent



January 11, 2008

Dr. Gregory Bernhardt, Dean College of Education and Human Services 404 Allyn Hall Wright State University Dayton, OH 45435

Subject: Statement of Support for Dayton Regional STEM School

Dear Dr. Bernhardt,

The West Ohio Center of Excellence in Science and Mathematics Education (WeEXCEL) strongly supports the proposed Dayton Regional STEM School (DRSS) as a key component to developing the Dayton Region's workforce and capacity for economic enhancement. The proposed DRSS is supported by a strong collaborative regional foundation of the partnerships of higher education, P-12 school districts and educational services centers, business and industry, Wright-Patterson Air Force Base, the Dayton Regional STEM Resource Center, EDvention, and WeEXCEL. STEM education plays a key role in economic development, and the proposed DRSS would serve as a model and a resource for regional school districts in infusing real-world applications and opportunities into STEM education.

The WeEXCEL Center, as an active partnership between K-12 and higher education, has provided regional professional development for both higher education faculty and K-12 teachers and has been a leader in developing innovative science and mathematics curricula for teacher preparation and professional development and for K-12 students. WeEXCEL is currently supporting higher education faculty and teachers working collaboratively in the Dayton Regional STEM Resource Center to develop curricula aligned with the industry clusters of sensors and power and propulsion. The STEM Fellows and resulting curricula will provide one resource for the proposed DRSS and the WeEXCEL Center will facilitate dissemination of best practices demonstrated by the proposed DRSS through teacher and faculty professional development. WeEXCEL strongly urges the funding of this proposal as it promises to provide a vibrant model of innovative STEM education for the region and state.

Sincerely,

Dr. Beth Basista

Director We*EXCEL* Center Wright State University

Dayton, OH 45435

Dr. Rebecca Krakowski

The Jahl.

Co-Director We EXCEL Center

University of Dayton Dayton, OH45469

## INVENTIS GROUP Ltd. ®

#### Innovation-Communication-Transformation

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Dr. Gregory R. Bernhardt Wright State University College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-001

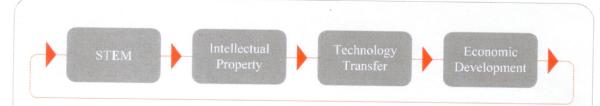
January 7, 2008

Subject: Commitment to Dayton Regional STEM School (DRSS)

#### Dr. Bernhardt:

Inventis Group Ltd. (Inventis) is pleased to provide this letter of commitment in support of the proposal for the Dayton Regional STEM School. Inventis is fully committed to this project for the duration of the proposal.

Inventis was formed in August 2004 to commercialize game changing technologies with market making applications and the potential for exponential economic impact. Based upon our proprietary methodology (patent pending), the Inventis mission is to develop, protect and commercialize technologies emanating from university, government and industry research labs. Our objective is to create wealth and grow high tech jobs thru the establishment of spin-out / start-up businesses. The Inventis vision includes the integral support of STEM education, which drives intellectual property, technology commercialization and economic development. The Inventis business model is shown below:



### Science, Technology, Engineering, Entrepreneurship, & Mathematics (STEM)

Inventis develops, promotes and donates to STEM programs ranging from preschool to post-retirement.

#### Intellectual Property (IP)

Inventis works with inventors from universities, government, and industry research labs.

#### Technical Transfer

Using cutting edge IP, strong management and investment capital, Inventis builds start-up companies and creates wealth.

#### **Economic Development**

Through this process, Inventis creates jobs and supports economic growth.

In addition, Inventis is establishing a not-for-profit organization named Discover Your Gift (DYG) to provide a mechanism for the allocation of a percentage of Inventis' profits to worthy causes, scholarships and programs supporting the education of children, students and the elderly. DYG will also serve to provide Inventis start-up companies as well as Inventis clients the opportunity to donate a percentage of profits for agreed upon causes. The DYG mission is to promote discovery and development of each individual's gift through exposure to and participation in educational programs and experiences.

As a Collaborator in the DRSS proposal, Inventis will assist in the development of curriculum, provide instruction and build program infrastructure in support of DRSS.

- Classroom instruction on STEM Entrepreneurship and Technology Transfer / Commercialization
  - Past success stories:
    - University of Florida MBA course development: Technology Transfer
    - University of Cincinnati School of Engineering course development: Technology & The Law
      - Seminar: Technology & Entrepreneurship: MBA in a Day
- Organization and management of Business Plan competition

Phase One: Feasibility Study

Phase Two: Business Plan

- Phase Three: Business Plan Presentation and Awards
- Internships / Mentorships / Shadow visits
  - Inventis will develop programs in each area as we move into our new offices in downtown Dayton in the 2<sup>nd</sup> Quarter of 2008.

In support of the proposal, Inventis will provide \$25,000 of in-kind cost share per year, which equates to 100 hours in year one. In years two and three of the DRSS proposal, Inventis will contribute an additional 100 hours each year for a total of 300 hours and a total in-kind contribution of \$75,000. The cost share from Inventis will be made available to DRSS in the first year of its program.

Inventis highly recommends and enthusiastically supports the proposal for the Dayton Regional STEM School (DRSS).

SinCerely

David

David J. Novak President / CEO Inventis Group Ltd.

513-518-6691



January 14, 2008

Dr. Greg Bernhardt Dean of Education and Human Services Wright State University Fairborn, Ohio 45435

Dear Dr. Bernhardt,

I am writing to express the full support of Time Warner Cable for the Dayton Regional STEM School. Time Warner Cable exemplifies technology and its application in our everyday lives. The telecommunications industry is growing and expanding at record rates; to maintain this tremendous growth Time Warner Cable is continually seeking employees with specialty educations and training in information technology and engineering. Employees with these high tech skills and knowledge are exactly what our organization needs to continue to be competitive and grow in the telecommunications market.

Time Warner Cable is excited about the development of the Dayton Regional STEM School and its concentration on ensuring high school students will receive an advanced education in the areas of science, technology, engineering and mathematics. This advanced education coupled with the real-world application experiences that students at the Dayton Regional STEM School will receive will help meet the workforce demands of Time Warner Cable while increasing the community's talent in the core industry areas.

Time Warner Cable is dedicated to assisting the Dayton Regional STEM School with its commitment to a quality education and success. To this end, Time Warner Cable commits to provide complete broadband access to the Dayton Regional STEM School for the first two years of the school's inception and most likely there after depending on the physical location of the permanent site. This broadband access will include cable TV access and high speed Internet access for the school, classrooms and computer laboratories for educational purposes only. Time Warner Cable also will provide an annual teacher workshop on technology in the classroom and related materials. Additionally, Time Warner Cable commits to provide airtime for 400 30-second marketing segments for the Dayton Regional STEM School. All of these services are to be considered in-kind donations to the Dayton Regional STEM School in excess of \$68,000. This commitment is predicated on the STEM School facility being housed in a building already serviced by Time Warner Cable. To the extent that internal wiring may

be required to provide service to individual classrooms, Time Warner Cable is willing to commit up to an additional \$10,000 in labor and materials.

Thank you for your commitment to making technology education a priority and ensuring high school students in the Dayton region have the opportunity to receive an advanced education that will them to be competitive in a global economy.

Sincerely,

Pame a E. McDonald

Vice President, Government & Public Affairs



January 15, 2008

Dean Greg Bernhardt, Ed.D. College of Education & Human Services Wright State University Fairborn, Ohio 45435

Dear Dean Bernhardt:

This letter is to affirm the support of LexisNexis regarding a request for proposal for the Dayton Regional STEM School. As an international information solutions provider and a major employer in the Greater Dayton Area, LexisNexis is keenly aware of the need to support a strong pipeline of talent into a very competitive environment.

LexisNexis strongly supports efforts that are collaborative and innovative; LexisNexis supports this initiative because it has the opportunity to synergize and complement many similar programs across our community. A Dayton STEM high school can be a cornerstone to address the need for a robust pipeline into a workforce that increasingly depends on technical disciplines. Ultimately, it can be a pillar on which to strengthen economic development in our area and the State of Ohio.

Education has long been an issue of critical concern to employees and to the company. LexisNexis employees donate thousands dollars and volunteer hours to support local needs including educational programs. Although exact support has yet to be determined, I am certain that LexisNexis will encourage and promote volunteer opportunities for our employees with the STEM high school. It is certain that LexisNexis intends to bring employee skills and expertise, in-kind support, corporate matching gifts and potentially other financial resources to this initiative.

LexisNexis is committed to helping make this community a better place in which to live and work. A STEM high school will be a valuable asset to make this a reality.

Sincerely,

Shelley Outlaw Manager, Community Relations US



January 14, 2008

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean Wright State University 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001

#### Dear Greg:

The Dayton Development Coalition is dedicated to creating dynamic economic development by strategically growing business, industry and research opportunities in the Dayton Region. The existence of skilled and talented workers, combined with a business friendly climate and supportive infrastructure are critical to success.

That is why the Coalition has chosen to play a leadership role in EDvention – the regional collaborative dedicated to accelerating STEM talent development to grow the Dayton Region. Working with Wright State University and many other partners to implement a multi-faceted short-term and long-term workforce development pipeline of talent, this region will become a magnet for high tech industry, commercialization of new technologies and work class innovations. The development of the Dayton Regional STEM School (DRSS) hosted by Wright State, anchored in the Air Force Research Laboratories and supported by so many engaged partners is one important piece of this regional strategy and we are pleased to strongly support its creation.

As an organization, the Coalition will work with the DRSS partners to better understand the workforce needs of regional employers, so that educational programming can better prepare young people with the skills and knowledge necessary to compete for the jobs here in the Dayton Region. In addition, we will dedicate staff time to assisting DRSS and EDvention with communicating important messages about the school and STEM efforts to the community at large. We will recruit business leaders spokes persons, assist with media relations support, and partner with DRSS and EDvention in presenting information on the inextricable link between economic development and education.

In addition, the Coalition will soon be introducing a new brand for the Dayton Region. To the extent possible, we will work with the school and EDvention to development public messaging that leverages connects to this new brand, thereby extending the messaging to our own citizens and those throughout the country and the world that Dayton is the place where talent grows and helps business thrive.

The combined value of financial contributions and in-kind personnel support for the DRSS will exceed \$ 500,000.

The Dayton Development Coalition applauds the leadership role Wright State University is taking in the development of this school, and is proud to support the work as a partner in its future.

Sincerely,

John P. Nauseef

President and CEO





Institute for Development and Commercialization of Advanced Sensor Technology

January 7, 2008

Mr. Greg Bernhardt
Dean, College of Education and Human Services
Wright State University
3640 Colonel Glenn Hwy.
415 Allyn Hall
Dayton, OH 45435

Dear Dr. Bernhardt:

The Wright Center of Innovation, Institute for the Development and Commercialization of Advance Sensor Technology (IDCAST), is pleased to support the Dayton Regional STEM School. This is a significant opportunity for industry, federal labs, higher education institutions, and regional school districts to collaborate in the development of a STEM school. Dayton has demonstrated an ability to create specialized secondary education opportunities that are focused on the very unique learning needs of the young people in this region. We believe that the STEM high school will be a significant and appropriate educational complement to what this region needs to develop the engineers and researchers that will comprise the workforce of the future..

Part of what makes Dayton so uniquely positioned to provide this type of STEM opportunity is the relationship that higher education institutions and secondary schools have with a wide variety of business and corporate partners. This endeavor will be no exception and the partnership will consist of Wright Patterson Air Force Base/Air Force Research Laboratory (AFRL), Edvention (the Miami Valley's P-16 Council), a variety of public school districts, career technology centers, business and industry partners, and selected foundations.

As a partner, IDCAST commits the following resources to the success of this endeavor:

- IDCAST will promote industry and federal lab participation in the development of courses and curricula, the mentoring of students, and promoting the hiring of students to obtain STEM experience.
- IDCAST will commit the cooperation of its own committee on STEM; which includes the AFRL, six universities, and more than 16 companies; to work cooperatively with the STEM Academy.
- IDCAST will gladly serve on any advisory board or function the STEM Academy may have.

UNIVERSITY OF DAYTON RESEARCH INSTITUTE

Sensor Technology Office 300 College Park Dayton, OH 45469-0180 (937) 229-3911 FAX (937) 229-5504  IDCAST will support grants that fund graduate level students to work in serious ways in K12 classrooms and to bring math, science and other STEM disciplines to life for young learners.

IDCAST in partnership with AFRL, the University of Dayton, the Dayton Chamber of Commerce, Edvention, Wright State University, our IDCAST business and industry partners, and a range of other community groups look forward to the opportunity to create and sustain a Dayton regional STEM high school in the Dayton region.

Sincerely,

Larrell Walters Director, IDCAST



#### Stacia A. Smith, Ph.D., NBCT - Superintendent

Clark-Shawnee Local • Greenon Local • Northeastern Local • Northwestern Local • Southeastern Local • Tecumseh Local

January 8, 2008

Dr. Gregory R. Bernhardt, Dean College of Education and Human Services Wright State University 3640 Colonel Glenn Highway Dayton, Ohio 45435-0001

Dear Dr. Bernhardt:

The Clark County Educational Service Center (CCESC) is excited about the prospect of having a STEM high school (Dayton Regional STEM School-DRSS) located in the Dayton area and convenient to schools in Clark County. Our teachers will benefit from hands-on staff development in STEM model curricula.

The Clark County Governing Board values our partnership with Wright State University, especially in the development of teachers' expertise with the CORE Science Teaching Grants. 18 teachers completed new licensure requirements in either Physics or Chemistry in partnership with CCESC and WSU in 2007.

We are pleased to partner with and support Wright State University in this STEM endeavor by helping in the school design process. To support the Dayton Regional STEM School development, we are asking our superintendent, Dr. Stacia A. Smith, to work directly with Wright State and DRSS personnel on the curriculum development of literacy courses for the school. Dr. Smith is nationally recognized as a literacy expert, especially in the field of adolescent literacy. She is one of the first Ohio teachers to be nationally board certified and is the only superintendent in Ohio to hold that distinction. Dr. Smith is committed to students and their academic success. While at Dayton Public Schools, she participated in the design and implementation process for three magnet schools including Dayton Early College Academy.

Dr. Smith will commit up to 30 days of her time directly to work with the literacy curriculum development, in addition to participating in organizational meetings. This commitment is equivalent to approximately \$45,000-50,000 in-kind services of her consulting and staff development time.

Thank you for your commitment to excellence in education through the development of the Dayton Regional STEM School. Please do not hesitate to contact me if you need further support.

Cincorols

Dr. John Agle, Board President

cc: Stacia A. Smith, Ph.D., NBCT

Di John Lagle

Dr. Gregory R. Bernhardt College of Education and Humanities Office of the Dean 3640 Colonel Glenn Hwy. Dayton, Ohio 45345-0001



January 15, 2008

#### Dear Dr. Bernhardt:

CDO Technologies, headquartered in Dayton, Ohio, employs more than 300 professionals who specialize in adding value through the "creative use of emerging technologies." Our mission is to *Empower customers to capitalize on their information assets by leveraging leading edge technology solutions that improve operational efficiency, enhance security and provide competitive advantage.* We pursue this mission throughout our business, as well as through the community projects and investments that we make.

We are interested in helping students throughout the Dayton region, particularly urban students, gain the skills and knowledge necessary to prepare to enter the workforce in science, technology, engineering and math fields that are critical to the success of our company and the economic welfare of our region.

I am writing to express our support and commitment to the Dayton Regional STEM School (DRSS). CDO Technologies is committed to supporting the DRSS partnership by assisting with the information technology design needed by the school and offering help desk related services to support school operations. In addition, we are interested in supporting operations with "MyEdPortal", providing support for the Team Center Community collaboration system (once license access to the system is approved), and perhaps the integration of electronic grade book technology.

In addition, we will work to design curriculum and project/inquiry based learning problems that expose students to cutting edge RFID technologies, asset management technologies and systems. We would also like to provide demonstrations of this work for students within our facilities (on a scheduled and limited basis) and/or on site at the school facility, and invite teachers to work along side our staff to gain field experience in industry.

We are committed to working with the DRSS throughout the design year to determine the full level of support they need for operations and to leverage our support and those of other partners as warranted.

We are very excited about the opportunity to contribute to the success of the DRSS and to help students in our community reach their potential in STEM disciplines. We estimate that the overall dollar value for the outlined services we will provide will be approximately \$35,000.

Sincerely, Alphanho Waffer 2

Al Wofford

President, CDO Technologies