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**School of Public and  
Environmental Affairs**

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# **REGIONAL ECONOMIC AND COMMUNITY DEVELOPMENT IN SOUTHERN INDIANA**

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# **Executive Summary**

## ***Tourism Development:***

Tourism is a major industry in southwest central Indiana, serving as a significant economic driver in the 11 counties detailed in this report. However, there is still room for the growth of tourism in the area. In order to more fully develop this sector in southwest central Indiana, this report makes recommendations within three categories: external marketing, internal marketing, and tourism mapping. External marketing recommendations include building a regional brand for tourism, pursuing specific target markets in nearby major population centers, utilizing Indiana University's alumni base, and advertising tourism as a recruitment tool for businesses. Internal marketing recommendations include increased promotion of the Indiana Artisans, improved communication and collaboration between Explore Southern Indiana and the Southern Indiana Regional Marketing Co-op, instituting specific marketing for age demographics, and designating tourism support staff at Radius Indiana. Tourism mapping recommendations include the use of interactive online maps, which we have built, and the eventual expansion of these maps through a fee-based option. These groups of recommendations are intended to coalesce in such a manner as to unify the area in a collective effort to increase tourism activity, and the ensuing economic benefit, in southwest central Indiana.

## ***Workforce Development:***

This report outlines workforce development in the SWC Indiana region through leverage of a combination of public, nonprofit, private and independent evaluation approaches. It recommends that the regional WorkOne one-stop career centers adopt and expand proven best practices from other areas of the state, as well as expanding marketing, web-presence and social-media efforts to expand awareness of state programming. The Nonprofit approach recommends the establishment of standardized STEM curricula in regional schools through partnership with local nonprofits such as Project Lead the Way, ensuring engagement with STEM topics and skills early in student development. Further opportunities exist for private partnership in the area of Afterschool and summer education, utilizing local industry and business funding and relationships to develop extracurricular activities that adequately prepare local students and youth to effectively enter the local workforce. Finally, the report provides examples of effective program evaluation principles and techniques and details a template designed to enable Radius Indiana to evaluate prospective programs based on a wide range of determining factors.

### ***IU Rural Center of Excellence:***

Based on findings from the Battelle Strategic Plan for southwest central Indiana, this report recommends that Indiana University establish a “Rural Center of Excellence” to coordinate research and programming in the eleven-county SWC Indiana region. This team recommends four focus areas for the center: 1) Rural Business & Cooperative Development, 2) Rural STEM Education, 3) Rural Health & Substance Abuse, and 4) Rural Technology & Connectivity. The report details numerous peer institutions already conducting similar activities and demonstrates the need for this type of action within the region. As detailed in the report, many rural-focused activities are already ongoing at IU. Additionally, many ongoing programs and research projects in other regions could be replicated and applied to the SWC Indiana region. Finally, the report provides a list of possible federal funding mechanisms for the establishment and implementation of the Rural Center of Excellence. By creating and investing in this center, Indiana University can become a glowing example of what public institutions can do for their local regions while also continuing to build its brand as a globally-renowned research institution.

# **Regional Tourism Development Plan**

## **External Marketing**

### ***Building a Regional Brand***

The creation of a regional or 'place' brand for an area is key to several sectors for any developing economy, including tourism and business development. This is achieved by creating a regional brand and identity. A successful regional branding evokes a sense of place in those who think of it, much how Napa Valley evokes a feeling of leisurely strolls through a winery or Las Vegas gives a sense of wild times and gambling. For the most part, these campaigns are centered on states or cities rather than a particular region, but successful branding of a regional area is quite possible, especially within a limited target geographic market. Studies<sup>1</sup> have noted that a successful campaign must adjust to the local context, and are reliant on the passion of independent project leaders and a profound connection with local networks across the business, government, and nonprofit sectors. Furthermore, a strong sense of place and pride within the inhabitants of the region is important, as it is their voices and culture that is being magnified for the outside world- why would a tourist or potential business come to the region if the people do not love their own homes?

#### *Southern Indiana: America's Heartland*

The primary over-arching brand to drive home in future advertising campaigns should be *America's Heartland*. There are two general categories of attractions and qualities that embody southwest central Indiana, and these are the small town feel and the outdoor attractions that grace the region. "*America's Heartland*" captures the essence of both of these qualities by harkening back to the frontier days of Indiana, where the wilds were unexplored and the towns were small, but industrious and patriotic. The region can use its history as a draw towards the people of the surrounding cities, such as Chicago, Louisville, and St. Louis, by having people recall with nostalgia the Westerns they watched as children and their grandparents farms and homes in rural areas; parents will want to connect their own childhoods to the lives of their children, by showing them what small-town America looks like via the small towns and attractions of southwest central Indiana. Likewise, the many outdoor areas in the region will be appealed to by recalling schoolyard tales of folk heroes like Davie Crockett and Lewis & Clark; as the many beautiful vistas of Indiana are relatively unknown to most people in the nearby cities, adding the air of mystique and exploration implied by the pioneer spirit of *America's Heartland*.

Of note, however, is that the terminology 'southwest central Indiana' should not be used in any advertising. The key to sticking an idea in someone's mind is to connect the tag-line to the area in question. As southwest central Indiana is an unwieldy name, at best, it introduces mental barriers

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<sup>1</sup> (Dredge & Jenkins, 2003) (Messely, Dessein, & Lauwers, 2010)

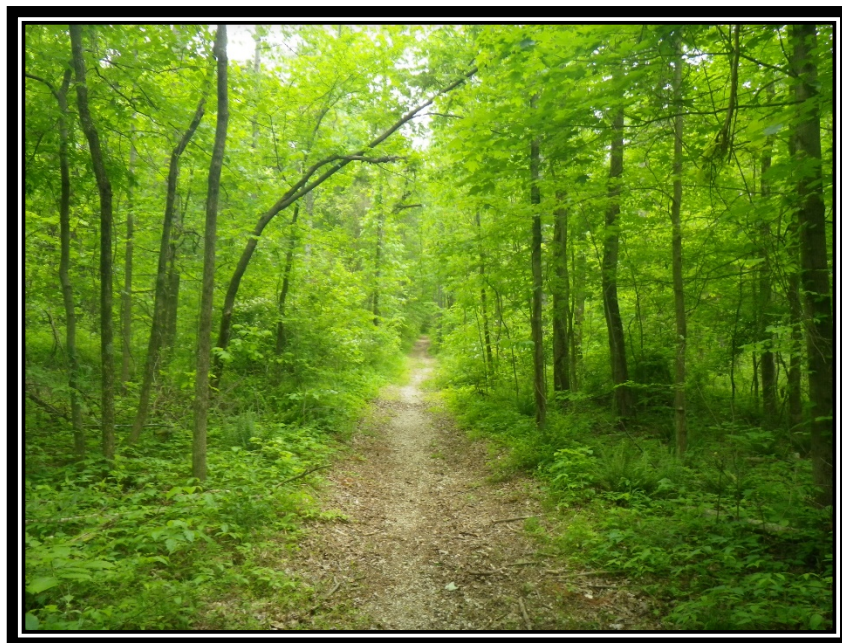
into the minds of target audiences. In any marketing strategy, the alternative of using 'southern Indiana' is preferable in that it is easily memorable and less mentally intrusive.

### *Brand Focusing*

*America's Heartland* is the overall message to push in advertising to external tourism markets, in that it is the central theme to base around individual markets and target groups. Explored below are several sample target markets and potential brand messages that fit within the idea of America's Heartland but are more tailored to each audience. Examples of brochures, flyers and other ads with these messages are located in the appendix.

### **Outdoor Adventure-** *America's Hidden Gem: Southern Indiana*

Nature enthusiasts and outdoor adventurers, such as rock climbers, kayakers and hikers, are adventurous by definition, always seeking out new locations to explore. As the southwest central Indiana region has many natural attractions but relatively few tourists, this marketing strategy is to play up that the region is unexplored. This gives the target audience the feeling of being the first in their peer group to discover new sights and the ability to show these locations to their friends. Thus, it adds in the social dimension of leadership in the target audience as well.



-German Ridge Trail, Hoosier National Forest

### **Family Vacations-** *Explore America's Heartland*

Particularly over school summer vacations, families partake in vacations with their children, visiting historic sites and celebrating patriotic holidays such as July Fourth and Memorial Day. The small towns and festivals in this region of Indiana are poster-children of Americana, thus very attractive to parents hoping to explore America's rich history with their kids. Marketing campaigns targeted at parents in the spring to encourage participation in summer festivals,

boy/girl scout camps, fishing, and hiking will help draw in seasonal tourism revenue from families with younger children, especially from the nearer cities of Louisville, Chicago and St. Louis.

### **Stress Relief- *Return to a Simpler Life in Southern Indiana***

The workers and suburbanites in the nearby cities have relatively fast paced lives like all city dwellers. Targeting these stressed business people for vacations should focus on the slow-paced entertainment common throughout the area. These include eating and drinking at one of the wineries on the wine trail, horseback riding in a state park, lazy mornings at a bed and breakfast, and a sunset round of golf at a PGA ranked course. These visions of relaxing activities are appealing to those people looking for a short vacation away from the kids, as well as those searching for an outing with their friends or with business partners looking to close a deal; all without needing to pay a fortune for a resort in Colorado or Florida. Pushing the affordability and ease of access to these amenities should bring in tourism dollars from short-term vacationers.



-Indiana Wine Fair 2014, Story Inn in Nashville

### *Conclusion*

Southwest central Indiana's attractiveness relies on its hometown feel and its outdoor activities to bring in tourism from outside the region. *America's Heartland* helps bring these two groups into a cohesive message of patriotism and exploration, telling adventure seekers and vacationers alike that they can find what they seek here. The *America's Heartland* message is highly flexible and is highly relatable to many target groups. Visual imagery and photography of the various attractions in the region will be key, as at the moment few people outside of the region know of the area. As sight is the primary sense, showing people what they can find here is important to bringing in their business.



## ***Target Marketing Specific to the Chicago Area***

### *Chicago*

The 'Windy City' is America's third largest city, with more than 9 million people living within the greater Chicagoland area. The greater Chicagoland area is growing rapidly with people all ages and socioeconomic status living within the region. Due to the large number of suburbs and exurbs, it is difficult to pinpoint average income and other household-level statistics for the region, but due to the sheer scale of the city, it can be assumed that there are large amounts of any targeted demographics within the media area. With that said, the incorporated city itself has a median income of \$44,000, and more than half of the population lies between the ages of 15 and 44. A further 22% are between 44 and 65, making a majority of the city population within the peak of their purchasing power.

Far more important to our analysis are the attractions that are provided within Chicago and what sorts of attractions are not readily available to the population. The city is home to a large number of artists, theatres, museums, sports, bars, parks, libraries and most other day-to-day entertainments one can think of for little to no cost. Thus, marketing to Chicago must rely on the rare amenities that the southwest central Indiana region has available and Chicago does not. The natural splendor of Indiana is the largest attraction to the southwest central Indiana area, something which the city lacks. The slower pacing and small town feel of the towns within this region are also notably different from the industrial Chicagoland area. Thus, marketing to the Chicagoland region may focus upon short-term 'get away from it all' trips for stressed families and workers looking for a slower pace and the serene outdoors. The low cost of rental housing, entertainment and transportation are suitable for marketing towards low to moderate income families and social groups as an event destination. The beautiful vistas of Indiana are also marketable to the young people of Chicago as cheap destinations for weddings, reunions and other mid-sized get-togethers.

### *Stress Relief*

Life within large cities such as Chicago is very energetic, but also highly stress-inducing. Workers and families with limited budgets are able to afford a 3 hour drive but not a plane flight to one of America's cheaper destinations. Thus, Southern Indiana is well positioned to receive travels on a mid-sized budget for short term vacations. The slower paced towns of the region are excellent draws for families that wish to have their kids learn American history while on a trip, while also allowing parents and couples to relax at their own pace in the various outdoor activities, shopping and other entertainment within the region.



-Wedding reception at White Creek Acres in Columbus

### *Girl's/Boy's Weekend Out*

The large number of wineries and golf courses within the southwest central Indiana region are well-placed for marketing campaigns appealing to men and women in their late 20s to early 30s. The wineries, horseback riding and other similar activities are appealing to groups of young men and women wishing to get away from their spouses and work by traveling with their friends to cheap luxury activities such as the bed and breakfasts and wineries in Indiana. Likewise, people who are looking to bond with business partners, friends and social groups can take advantage of the PGA-ranked golf courses in the area, of which there are few within the Chicagoland region.

### *Party and Wedding Destination*

The availability of cheap rentals and venues within the scenic hills of southwest central Indiana makes the area suitable for marketing towards several groups of people. The central location of the area (between St. Louis, Chicago, Louisville, Indianapolis and other cities) creates a crossroads easily reachable by multiple groups. Gatherings of friends, wedding parties, and reunions of all sorts are suited perfectly for southwest central Indiana. First, wedding groups looking for luxurious facilities without a great cost can choose this region as the location for a wedding and/or reception for their family, as there are several farms, event centers, scenic churches and other suitable places for weddings. The low cost of rental housing and hotels also can appeal to families looking to have a family reunion within the area. Finally, groups of students, young professionals and other social groups are able to rent housing in this region for longer outings, granting them access to the caves, wineries, golf courses, hiking and other entertainment nearby while allowing them privacy at night to enjoy themselves as they wish.

### *Recommendation*

Overall, we recommend that marketing towards the Chicagoland area focus on bringing in social groups and families, especially in the low-mid income range. The highly paid professionals of the city will not likely choose Indiana as a destination, but the close proximity of this region to

Chicago, as well as its low prices for rentals, entertainment and transportation create an excellent destination for events of all sorts.

### ***Target Marketing Specific to the St. Louis Area***

#### *St. Louis*

St. Louis is a city of nearly three million people situated about 3.5 hours from the counties within the purview of this report. The city's median age is 34, a prime target age for families with children between 6 and 16. This provides an opportunity for family friendly weekend trips to see Indiana's natural areas. The annual household income is around \$60,000 dollars a year, with a cost of living 6% below the national average, giving the people of St. Louis moderately sized disposable incomes. Furthermore, the topographical make-up of the city's surrounding regions is quite different than that of Indiana. The hills and rivers of southwest central Indiana are distinct from the plains and foothills common throughout Missouri.

The city is also ranked by Forbes as a top 100 city for business in the United States, with industries centered in bio-sciences, education and healthcare. As southwest central Indiana is another center of biological and physical sciences due to the Crane naval base, there are opportunities to attract businesses to the region for both business retreats as well as potential expansions. With a young, growing population at the prime of their lives, the city is an excellent candidate for marketing opportunities, particularly those focused on family weekend trips and small-to-medium sized business retreats.



-Amish horse and buggy in rural Daviess County

### *Family Friendly Activities*

Southwest central Indiana has the potential to attract families with adolescent and teenaged children from St. Louis. The natural areas that are a highlight of this portion of Indiana can be used to attract family and group outings to the forests and nature-focused destinations in the region. Much of Missouri is dominated by the Ozark Plateau and northern Plains climate zones- a focus on advertising the opportunities for hiking, fishing and other outdoor activities could attract families and groups such as the Boy Scouts to the region for weekend and summer activities. The low cost and high quality of Indiana's local restaurants and hotels near the parks is also attractive to families looking to save costs on their vacation activities. A push for the expansion of summer camps and camping zones alongside the state and national parks services could be key in attracting families to the area.

### *Business Opportunities*

There are a large number of small hotels and bed & breakfasts throughout southwest central Indiana, particularly around the region of Crane naval base. Both St. Louis and this part of Indiana share industry in the biological and defense sectors. A focus on attracting businesses to the area for strategic meetings and business retreats can bring both short-term and long-term business to the area. The facilities in this region are suitable for small business meetings and offer a range of recreational activities in the surrounding area. Between access to key industry players in the bio-defense industrial cluster based around Crane naval base and the recreational infrastructure available nearby, southwest central Indiana is an excellent location to develop business retreats and conferences for companies from the St. Louis area. Business groups that enter the region for conferences and retreats are also easily available targets for selling the benefits of Indiana as a center of low-cost business expansions. Selling the industrial cluster, low taxes, cheap land and workforce development efforts to businesses during retreats has the potential to increase the number of companies doing business in the region.

### *Recommendations*

Overall, we recommend advertising our available wilderness zones as family-friendly to St. Louis' population, with a focus on Boy/Girl scout groups and other adolescent organizations to attract family vacations. We also recommend promoting the region to St. Louis' businesses as a location for business conferences and retreats, with an emphasis on the bio-science and defense industries within St. Louis. The tourism industry of the southwest central Indiana area will gain direct business and the local bio-defense cluster around Crane naval base can add new companies to its portfolio.

## ***Target Marketing Specific to the Louisville Area***

### *Louisville*

The city of Louisville, Kentucky, with the surrounding Jefferson County included, is home to a population of 756,832 residents with median per-capita income of \$27,925 as of the 2014 census. 63.1% of the population is between 18 and 65 years of age, with a median age of 37. Since the majority of the population is in the active workforce age demographic, and the cost of living is 10.1% below the national average, this is a city where residents would be more likely to drive short distances to nearby destinations to minimize travel costs in their activity plans. While the Louisville and Jefferson County areas do have many of either the same or competitively similar tourism offerings to the southwest central Indiana area, what they do lack are lake related outdoor water recreation. The GoToLouisville.com website already lists Indiana Caverns and Squire Boone Caverns as two of its destinations that are in southern Indiana, there is definitely room for more offerings that can be provided by the southwest central Indiana region.

### *Tourism options*

Outdoor water activities on Lake Patoka would be an activity that this region would be able to provide to tourists from Louisville, where the area lacks a comparable local alternative. French Lick Resort & Casino is already being suggested in Louisville tourism sites, so it would not be a stretch to add Paoli Peaks and Lake Patoka to this list. Alcohol production tours that southwest central Indiana offers are less likely to be successful in this market due to the Kentucky Bourbon trail, though marketing our vineyards using the angle of the usage of regional grapes for their wine could have some value to connoisseurs.

Although there is a strong and established artisan community in Paducah, Kentucky, tourists leaving from Louisville could travel a shorter distance to see regional artisanal products from southwest central Indiana. The artisan trails offer free exposure to the work of local Indiana artisans, as do the open studio hours many artisans keep in the month of October.



-Patoka Lake

### *Business opportunities*

The inventory assessments for Crawford, Daviess, Martin, and Dubois Counties have a large number of businesses that are either restaurants, local grocery and general stores, or are artisanal food producers. These restaurants and producers can receive more exposure and reputation by creating customizable culinary and farm tours that each county can offer in a “taste of (name) county” type of promotion. In the counties with Amish family owned restaurants and produce these businesses can be incorporated into either a heritage tour in the county or a dedicated heritage food tour, depending on the county and available businesses. The demographics of the Louisville tourists are such that they will most likely be of working age that keep a significant amount of their income after living expenses and therefore likely to want to do an activity outside of town and be back that night or maybe the next day. We want to capitalize then on higher volumes of tourists coming from Louisville and market more towards close activities that they either do not have in their home town or are just different enough to give the impression of novelty.

### ***Attract Indiana University Alumni to Revisit the Area***

The alumni of IU represent a fantastic opportunity for southwest central Indiana region to increase the number of recurrent tourists. IU alumni live throughout the entire world, but there is a high concentration of alumni throughout the Midwest that constitute a market with a high probability of visiting the area. The problem is that when they do visit, they mainly stick around Bloomington without ever getting out into the rest of the surrounding area. Instead of this, the attraction of IU should simply serve as a launching point to convince alumni to experience the rest of southwest central Indiana during their time here.

This can be accomplished through increasing collaboration between Radius and the IU Alumni Association (IUAA). By working together, Radius could use a relationship IUAA to advertise a plethora of tourism opportunities to IU alumni. For example, before the annual Homecoming football game and tailgate, Radius could provide IUAA with a list of lodging alternatives throughout the region. Also, many alumni have young families, thus making it appropriate to provide them information regarding the vast number of family-friendly outdoor activities that the area has to offer. This would incentivize alumni to bring their entire families with them when they visit.





-The Sample Gates at Indiana University in Bloomington

Radius could also use a relationship with IUAA to reach out to alumni directly. Every summer IUAA hosts the Alumni Leaders Conference at the IU Bloomington campus. IUAA runs a variety of activities and engages other IU offices in order to provide a fun and entertaining experience to the IUAA members that are able to attend. This annual event presents wonderful opportunities to those that are in attendance; from showing the variety of changes and exciting initiatives taking place around campus, to a chance to network with other alumni from all over the world. Radius could take advantage of this event and use it as a forum to quickly disseminate tourism information to a wide array of alumni.

In summation, IU's large number of alumni that live within reasonable distance of the southwest central Indiana region constitute an invaluable opportunity to increase tourism within the area. They have a strong connection to their Alma matter and this personal relationship they have with the university should be able to be parlayed into frequent visits to this part of the state. By partnering with the IUAA, Radius can use this source of recurring visitors to market specific aspects of tourist attractions throughout the region to great effect.

### ***Tourism as a Recruitment Tool***

In order to create interest in living in southwest central Indiana and retain more residents, the tourism sector can also be employed as a human resources recruitment vector. The most direct and simple approach would be to have a board or kiosk in the tourism offices that provide contact information for local area businesses that are currently hiring. If Radius is able to commit human resources to attracting potential job-seekers using the tourism platform, individual counties could hire representatives to communicate job postings, a liaison for college campus visits to relay job postings or provide recruitment materials for businesses in various nearby counties, or a web manager to maintain a job postings aggregation site for southwest central Indiana employment opportunities and set a portal to it from the Radius website. Establishing representatives for the county tourism offices could be as simple as repurposing existing staff if personnel allows.

If Radius already does conduct college campus visits, then the liaison potentially already exists and then is just limited in what materials they are bringing with them to campus visits. A job list site should be well advertised to local businesses in the counties so that they are comfortable with posting their openings and so that applicants using the site are actually successful in gaining employment through its use. All of these options would include materials that could of course be Radius-branded to increase its visibility as a job-finding resource. Marketing materials distributed by Radius for tourism should also include a section with dedicated mention of where to find job postings (either online or at the tourism offices).



# Internal Marketing

## *Promoting Indiana Artisans*

In order to strengthen the Indiana Artisans collaborative that launched in 2008, Radius should consider a range of initiatives that seek to increase Artisan enrollment and attract tourism to the region. By emphasizing initiatives that increase Indiana Artisan visibility and reduce enrollment barriers, particularly in rural areas, while also more convincingly communicating the value of joining the Artisan network, Radius will strengthen the foundation of organized Artisan activity in the region and establish a brand for Indiana-made goods that extends well beyond state lines.

Ideally, Indiana Artisans should explore as many avenues as possible to increase enrollment, such as opening regional storefronts to sell artisan arts and foods, and increasing outreach and marketing in rural areas to make joining the organization both more accessible and beneficial. The possibility of a regional store centered in Bloomington, Jasper, Bedford, Nashville, or other population areas, could provide additional economic incentives for local artisans to join, particularly if retail locations can generate significant profit sharing with local artisans. Rural marketing efforts should emphasize storefront fliers and personal communication with local artisans to better inform them of the application process and benefits of joining the Indiana Artisan organization. These efforts could alleviate fears of past programs that some Artisans feel under-delivered.

Perhaps the most essential recommendation for Radius to implement is the need to improve communications with Indiana's artisans, both in regards to the application process and the prospective benefits of joining. From our experience, prospective artisans are unclear of how to apply, the costs of becoming an official Indiana Artisan, and the benefits they will receive from membership. These concerns are likely the most pressing in rural areas where internet access is low. Fliers, and more likely, person-to-person contact may help lesson these barriers to local artisans becoming official Indiana Artisans. This may require additional attention at Radius, particularly a staff person who is tasked with identifying and enrolling local arts-and-food artisans that would be valuable to the Indiana Artisan brand. In addition, this staff-person could help utilize an "Artisan Trail" that uses online mapping techniques (detailed later in this report) to develop travel-packages in the region suitable for different age groups and recreational interests.



-Weaver at the 2015 Indiana Artisan Marketplace

### ***Increase Collaboration between SIRMC and Explore Southern Indiana***

The Southern Indiana Regional Marketing Co-op (SIRMC) currently collaborates with the Indiana Office of Tourism Development and Historic Southern Indiana. The organization has had one planning session with Explore Southern Indiana in the past, but no action has been taken to begin collaboration between the two organizations.

The goals of SIRMC and Explore Southern Indiana seem to overlap. Since Explore Southern Indiana and SIRMC are both major marketing organizations for Southern Indiana, we recommend close collaboration between the two entities in order to achieve maximum marketing outreach. Since SIRMC currently works closely with the Indiana Office of Tourism Development and Historic Southern Indiana (a cultural heritage organization), we believe that reaching out to Explore Southern Indiana to organize collaborative efforts will be highly feasible for SIRMC.

We recommend that a representative from SIRMC attend monthly or bimonthly meetings held by Explore Southern Indiana, and vice versa. This would enable the organizations to communicate regarding successful and unsuccessful marketing strategies, upcoming events, etc. We also recommend that a board member from SIRMC join the board of Explore Southern Indiana, and that a board member from Explore Southern Indiana join the board of SIRMC. If SIRMC and Explore Southern Indiana communicate regularly, we believe that both organizations could reach a wider audience and achieve optimum marketing success among their audience, which would ultimately result in improved tourism for Southern Indiana.

## ***Recommendations for Age-Targeted Marketing***

### *Ages 18-30*

Since IU is the largest university within the southwest central Indiana region, we believe that IU students, faculty, and staff should be the main focus of target marketing for the 18-30 age group. Many IU students, faculty, and staff take part in outdoor activities such as hiking, climbing, and caving. The southwest central Indiana region has an array of parks, nature preserves, and other outdoor recreation areas that could potentially attract those associated with IU. We believe that connecting with groups such as the IU Outdoor Adventures Club would help to attract more visitors to attractions throughout southwest central Indiana. We recommend sending updates to the IU Outdoor Adventures Club and other clubs regarding outdoor recreational activities and promotions. One of these promotions that currently attracts a large number of IU students is College Night at Paoli Peaks. These clubs could share this information with members through email, social media, and meetings.

We also recommend that the southwest central Indiana region have a strong social media presence in order to quickly and easily share this kind of information with the 18-30 age group. Specifically, Twitter and Facebook accounts would be most effective. Social media is the most widely used communication platform for people in this age group.

IU graduate students in schools such as the School of Public and Environmental Affairs and the School of Public Health should be another focus of marketing for the southwest central Indiana region. Graduate students often have access to cars for transportation and are in search of weekend activities since they are sometimes unfamiliar with the area. We recommend producing a targeted brochure highlighting the southwest central Indiana region's top tourist destinations and outdoor recreation activities and working with graduate programs at IU to provide this brochure to graduate students during their orientation. We believe that incoming graduate students would be a better focus than incoming undergraduate students because incoming undergraduates usually do not have access to cars for transportation and are usually interested in staying on campus for weekend activities.



-College Nights at Paoli Peaks

### *Ages 50-60*

In order to target the 50-60 age group we recommend advertising activities and destinations in local newspapers as well as local radio and television stations. The radio stations we would recommend advertising on would be WAMW-107.9 FM in Washington, WRZR-94.5 FM in Loogootee, WQRK-105.5 FM in Bedford, WPHZ-102.5 FM in Orleans, WFLQ-100.1 FM in French Lick, and WAMW-1580 AM in Washington. This broad array of talk radio and different types of music will allow for the largest audience to be reached.

The local newspapers we would recommend advertising in would be The Paper of Montgomery County, The Dubois County Herald, Greene County Daily World, Paoli News-Republican, and the Washington Times-Herald. These newspapers are all popular in their areas and would reach a significant population in the southwest central Indiana region. As far as television stations we would recommend WMYO in Salem, which is a Mynetworktv station, and WJTS in Jasper which is an America One network. Both of these stations are smaller networks that would cater to marketing internally in the southwest central Indiana region. These stations broadcast a variety of programming including sporting events, cooking shows, and news programs. They would be a perfect place to include an advertisement for all that the southwest central Indiana region has to offer.

Our strategy for attracting people in this age group to explore new things in the southwest central Indiana region is to advertise activities that individuals in the 50-60 year old age group enjoy such as winery tours, golfing, and arts and crafts shops. Online interactive maps (detailed later in this reports) for the southwest central Indiana region will enable people to plan trips to these different attractions with ease. The interactive maps will be helpful to attract people of all ages to the southwest central Indiana region. The radio, newspaper, and television advertising will be essential though to reach those that do not have Internet access.



-The Pete Dye Course, French Lick

### ***Increasing Collaboration between County & State Tourism Offices***

One strategy for improving and further developing the tourism market in Indiana is increasing the collaboration between the counties that have their own tourism offices and the state's main tourism agency. There are multiple counties within the southwest central Indiana that advertise their tourist destinations on the Internet and various media outlets, but most cannot dedicate as many resources to these efforts as they would like. Meanwhile, the Indiana Office of Tourism Development has an aesthetically pleasing campaign called "Honest to Goodness Indiana" that markets some larger events that are held in the state and larger tourist attractions, but fails to include many important features within the southwest central Indiana region.

In order to develop a more streamlined and effective tourism campaign that will include items from all over the region, large and small, there are several strategies that should be looked at. First, it would be essential for all county tourism employees to be in frequent contact with the same person from the state tourism agency in order to maintain accuracy of all tourism information. Another strategy would be to form a position at Radius that would serve as 'Tourism Coordinator'. The 'Tourism Coordinator' would be in charge maintaining communications between the state tourism agency and each county's tourism employees.

The 'Tourism Coordinator' position would entail a large workload, but would certainly be feasible once the person became familiar with the southwest central Indiana region. If no additional employees are added, a lack of tourism development capacity in the region may persist. Simply increasing communication efforts between the Indiana Office of Tourism Development and each county could help, but these efforts would certainly be bolstered through the addition a central, supporting staff member at Radius.

# Tourism Mapping

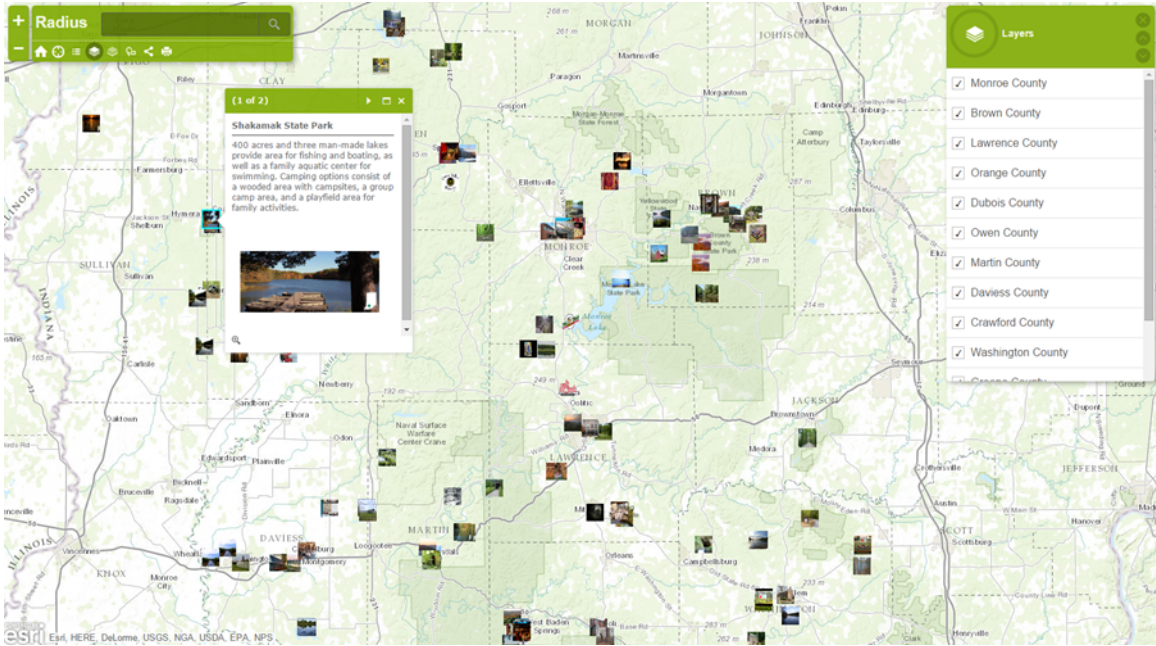
## *Interactive Map*

The mapping software we chose to create the interactive map is the free version of ArcGISOnline. Using this tool minimizes licensing cost issues and is a live interactive map that is user friendly. Initially, we were planning on creating different static maps showing attractions in each county, using ArcGIS software. However, we felt that an interactive map was the best way for users and potential tourists to access this information and view all of their trip options. After extensive web research, we found that most of the maps we were planning to create already exist but are all in different locations, are not specific to the 11 counties, and many were static. Creating an interactive map is a way to bring together all of this information and to tailor it to the southwest central Indiana area.

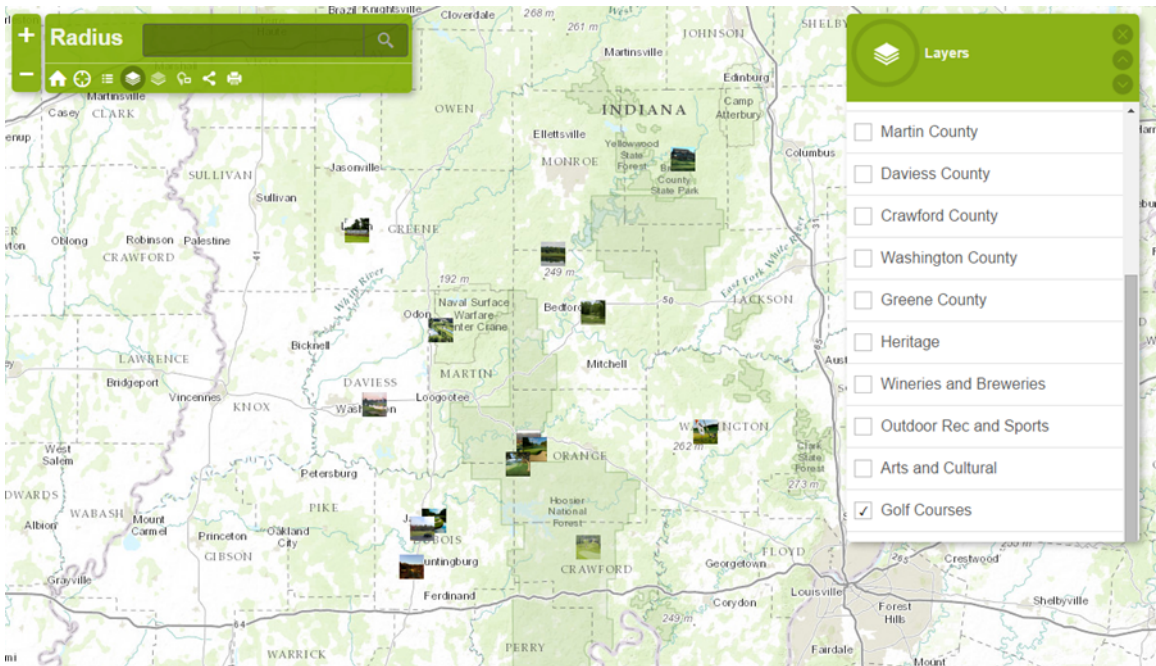
## *Technical Aspects*

The map offers interactive layers users can turn on and off, according to their interests and the types of locations they would like to visit. Each location on the map gives a brief description, a picture, and a link to the website for further information. The information was taken from updates made to the existing inventory assessments for each of the eleven counties. The map includes 16 different layers that can be viewed individually or in conjunction with other layers. They are easily turned on and off with a “check box”. There are 11 layers showing attractions for each of the counties individually. In addition, we chose to add layers labeled Outdoor Recreation, Heritage, Arts and Culture, Wineries and Breweries, and Golf Courses for the eleven county area as a whole. The user can view the landmarks on a number of different base-maps. Some options for base-maps include: National Geographic, USGS National Map, and OpenStreetMap. Once created, the map is available to access from a web link and can be updated easily at any time. The software is very user friendly and does not require prior map creation experience. The link to the map or code can be uploaded to your website and can be accessed directly by users.

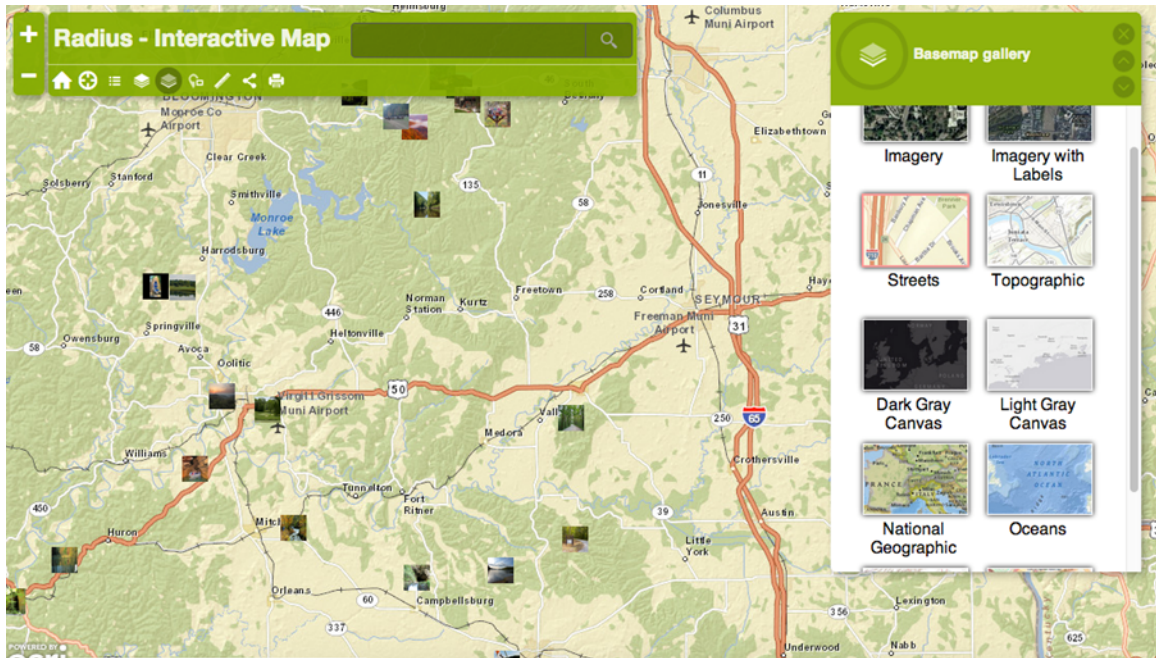




-Screenshot of the interactive map with every county selected



-Screenshot of the interactive map with the "Golf Courses" tab selected



-Screenshot of the interactive map with the “Streets” base-map selected

## ***Static Map***

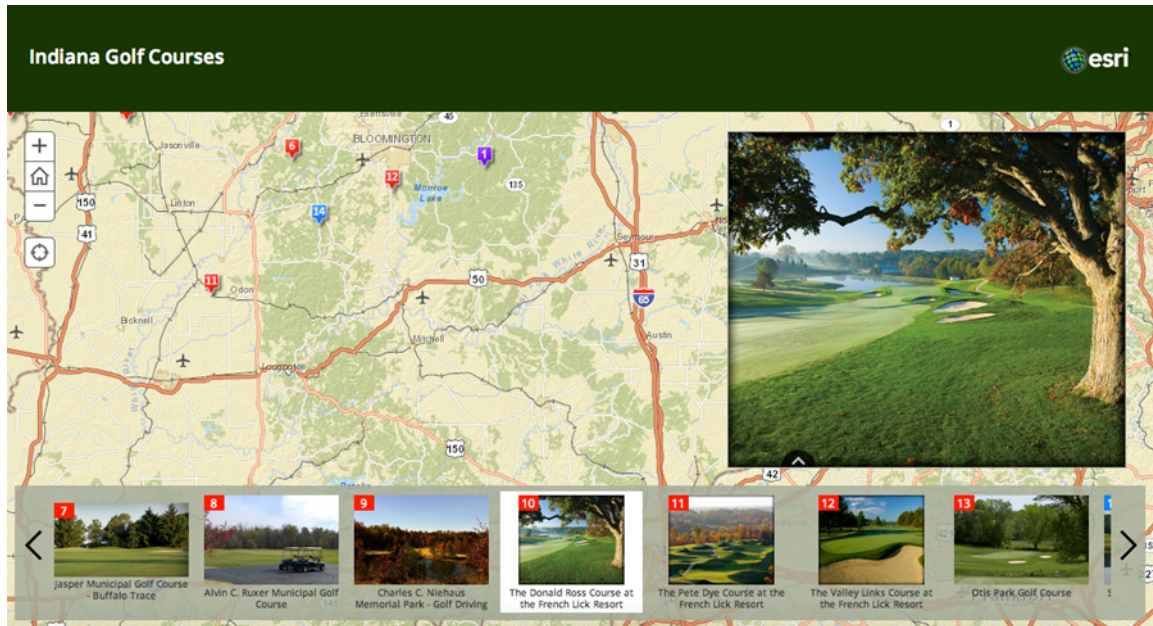
Due to time constraints, we created a static map using ArcMap showcasing the landmarks in Orange County, Indiana. To input each location, the exact coordinates have to be uploaded. The purpose for creating this map was to show a comparison to the interactive map and allows for greater analysis of spatial data. We believe that the purpose of this map would be specifically for internal use and possibly planning and economic initiatives. The specific spatial data can be accessed, manipulated, and analyzed through geographic information systems and may be useful in the planning of transportation infrastructure. However, we believe the interactive map to be much more useful for tourism purposes because of its user-friendly nature.

## ***Recommendations***

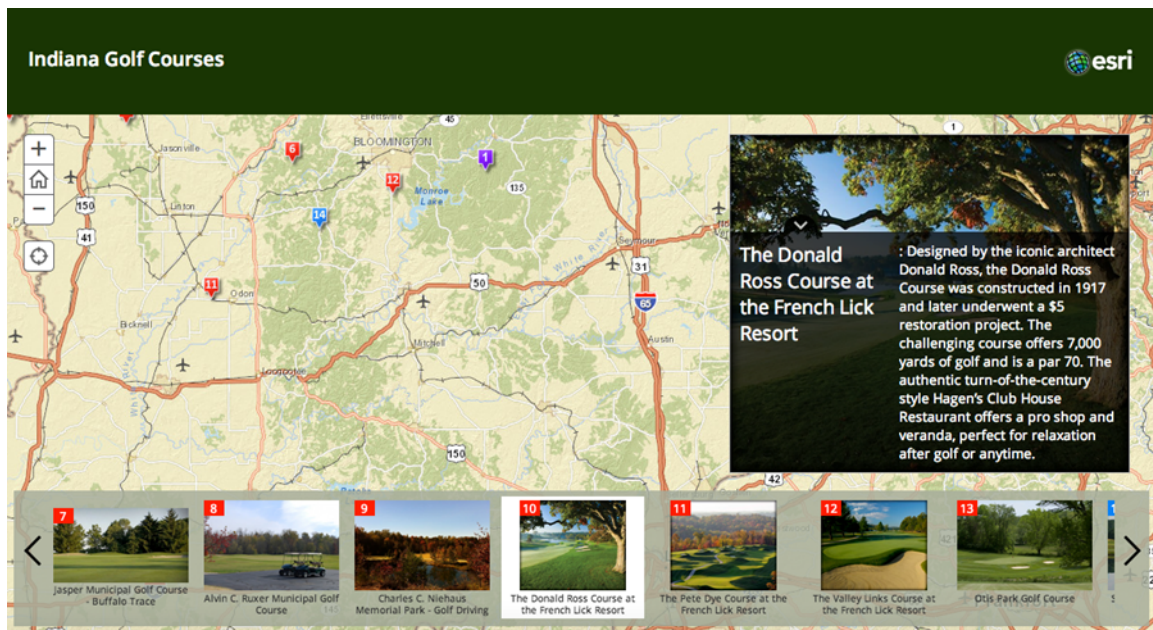
- Interactive map: funds permitting, there is a subscription based version of ArcGIS Online that can provide the following additional features:
  - Perform spatial analysis
  - Add your organization’s logo and banner to your ArcGIS Online homepage
  - Includes technical support
  - Create a custom URL for your ArcGIS Online homepage
  - Make maps in Excel for Office
  - Greater storage capacity (>2GB)
  - Monitor usage information
- Trails: Trails can be manually drawn onto the interactive ArcGIS Online map, if so desired.



- Story Maps: We created an example of a different type of interactive map using the ArcGIS Story Map Tool. We suggest this type of map to be used for visual representation of some of the recommended tours or individualized packages. However, we suggest no more than 20 landmarks. This map represents a different way to display information and allows for inclusion of audio, video, and other benefits of interactive maps.



-Screenshot of the golf course story map



-Screenshot of the golf course story map with an individual course selected

## ***URLs for the Maps***

*Interactive Map*

<http://arcg.is/1Ef756B>

*Golf Theme Map*

<http://minahilt.maps.arcgis.com/apps/MapTour/?appid=8d289c3111b5457188143a743932c56d>


## Appendix



-Sample banner advertisement



-Sample magazine advertisement



**Explore America's Heartland**

Come visit Southern Indiana

Plan your next family vacation to one of our many charming towns  
Boy Scout Camps for the Summer and Winter  
Great camping in our outdoors  
Horseback riding through the wilderness

-Sample full page magazine advertisement



**Explore America's Heartland**

**Come visit our Amish communities in Southern Indiana**

**Acquaint yourself with another way of life**      **Experience the craftsmen and artisan shops**

**Enjoy the down-home cooking**      **Make yourselves at home here**

-Sample billboard advertisement

# **Regional Workforce Development Plan**

## **WorkOne Indiana: Utilizing Existing State Resources**

The key to effective workforce development in Southwest Central Indiana lies in both the creation of new opportunities for jobseekers and employers, and the utilization of existing resources. Through the WorkOne network, the 11 county region has an established system of effective employment service providers, ranging from comprehensive adult education programs, employer referral relationships, and a vast array of hard and soft-skill workshops and resources.

However, missing from the complex workforce development equation are the means to attract a greater number of jobseekers to utilize the benefits of WorkOne services. Additionally, opportunities exist for the centers to incorporate the best practices evident throughout the region and the state of Indiana to improve existing workforce impacts. In short, the programs exist and the programs work, the challenge lies in effectively marketing those programs to the people of Southwest Central Indiana.

WorkOne centers offer a range of programs that directly address the problems outlined by the Battelle Strategic Plan. These include workshops on resume building, labor market information, interview preparations, education on, and referral to designated career pathways, and enrollment in specific occupational training seminars such as WorkKeys assessments and WorkINdiana referrals. In addition, WorkOne operates a complex network of employers looking for people to employ, and acts as a driver of regional cooperation.

Despite the effectiveness and the range of programs available in a WorkOne center, they are difficult to find and utilize without direct visits to a center. While web presence for the region has been established, information, especially on the times and dates that training and workshops are offered, is difficult to find or nonexistent. Dramatically overhauling the existing website and increasing the overall web presence of the region, along with innovative strategies of marketing and awareness would ensure these programs are used to their full potential.

In our assessment of the state of workforce development in Southwest Central Indiana, we identified the WorkOne centers as quality, under-utilized resources struggling with how to better attract interested jobseekers and employers. The below report outlines recommendations, best practices and strategies to ensure citizens of Southwest Central Indiana have access to the programs they need and deserve.

## ***Regional Presence & Function***

The Battelle report outlines a strategic plan for workforce development in the 11 county region of Southwest Central Indiana. Of the six strategies identified to ignite economic growth and create community prosperity, the following strategies are most applicable to the internal and external order of WorkOne centers:

- Advance a sense of regionalism
- Advance workforce development through career immersion initiatives aligned with federal, state and local efforts
- Focus retention, expansion and attraction efforts on those industry clusters that provide the greatest opportunity for economic growth in the region

Currently WorkOne centers are available throughout 12 regions in the state of Indiana. The majority of Southwest Central Indiana's WorkOne centers are located in Region 8 in the following counties: Monroe, Brown, Daviess, Greene, Lawrence, Martin, Orange, and Owen. Additional WorkOne centers that are among the 11 counties outlined in the Battelle report are located in Region 10, in Crawford and Washington counties, and Region 11 in Dubois County. Of the established WorkOne centers in Southwest Central Indiana, 7 out of 11 are full service centers while the others are Express. Express centers tend to be smaller in size and generally do not offer unemployment benefits assistance.

All the WorkOne centers in Region 8 hold the same hours of operation, receive state funding for programs and workshops, and provide similar services for jobseekers. The Workforce Investment Act (WIA) of 1998 mandated that states establish "one-stop" career centers (i.e. WorkOne) as a means to better serve communities through federally funded programs in workforce development. The U.S. Departments of Labor, Health and Human Services, Education, and Housing and Urban Development (GAO 2008) provide the bulk of state funding for WorkOne training programs. The Workforce Innovation and Opportunity Act (WIOA) supersedes the WIA and will be in effect on July 1, 2015. The WIOA will place a greater emphasis on centers to achieve results for jobseekers, workers, and businesses through improved access to comprehensive services, more streamlined operations, and better public recognition (DOL 2015).

WorkOne centers offer assistance in skills assessment, skill building, training, and career counseling. Online skills assessment tests such as Indiana Career Explorer (ICE) are used to help jobseekers explore career options and determine qualifications for employment. Training

workshops in Financial and Digital Literacy, Resume Writing and Interviewing Techniques, Career Exploration, Job Search Techniques, and Unemployment Insurance are also available on a monthly basis. Other training programs include High School Equivalency (HSE) courses and Adult Basic Education (ABE), which help high school students prepare for the GED and adult learners build skill in reading, writing, and math. WorkINdiana is another unique way for individuals to earn a high school equivalency certificate in addition to a career certificate in Advanced Manufacturing, Business Administration, Health Care, Hospitality, Information Technology, or Transportation and Logistics. Lastly, WorkOne centers help clients with the job search, process and serve as valuable links between employers and jobseekers by providing referrals to job openings, assisting with veteran services, and continuing career counseling services.

The WorkOne center located in Bloomington, IN, currently functions as a regional hub for workforce development training and employment connections. The center receives on average 281 clients a day and accounts for 50 percent of the entire regional usage of WorkOne services. Although there is significant engagement in WorkOne services (e.g. approximately 12,000 individuals annually attend WorkOne organized workshops in the region), the Southwest Central region falls short compared to other regions in Indiana. For example, Region 9 has the highest percentage of adult education students enrolled in the WorkINdiana program (Region 8 is currently ranked number 4). As far as marketing and social outreach goes, Region 9, like Bloomington, does most advertising by community based word of mouth; receiving a large majority of clientele through referrals from local community and public organizations.

Bloomington WorkOne partnerships include local economic development organizations, the Chamber of Commerce, City Government, and high school and post-secondary schools such as Hoosier Hills Food Bank and the Broadview learning Center. The Bloomington regional coordinator is also an active member of the Housing Authority board and organizes monthly job searches at the local Public library. Region 9, however, has a greater online presence and uses both Facebook and Twitter to inform the public about WorkOne services. A major benefit of using social media is that it is a cost effective way to get the word out to a large population. WorkOne flyers distributed to the Workforce Investment board, post offices, and community organizations are another effective strategy. WorkINdiana of region 9 is currently finalizing a flyer targeted to students graduating from high school but not going to college. The flyer encourages lifelong learning and provides information about enrollment in the WorkINdiana program.



To help maintain a sense of regionalism, Region 8 organizes bi-monthly management and leadership meetings with other WorkOne centers throughout the region to communicate upcoming workshops and events such as job fairs and training opportunities. The regional workforce team employs an education coordinator, training coordinator, and business services coordinator. Having a team dedicated to improving communication between regional WorkOne centers helps foster a sense of regionalism throughout Southwest Central Indiana by connecting jobseekers with employment opportunities and services located in other counties. Regional communication between centers is one way to advance workforce development, however, it is important for WorkOne centers to continue to improve upon marketing and social outreach in order to find better ways to connect jobseekers with WorkOne services.

## ***Strengths, Weaknesses, Opportunities, and Threats (SWOT)***

An analysis of WorkOne centers’ Strengths, Weaknesses, Opportunities, and Threats (SWOT) demonstrates that the WorkOne centers located in Southwest Central Indiana are highly functional and offer quality services that are effective in building a strong regional workforce. Continuing social outreach and better marketing of services, while maintaining communication between regional centers and job seekers, may help WorkOne centers serve a larger population across a wide range of disciplines and industries. In order to reach this goal, WorkOne centers must find innovative ways to market services while maintaining compliance with the state.

*Figure 1: SWOT Analysis of WorkOne Centers*

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• High number of programs offered</li> <li>• Quality services and diversity in available programs</li> <li>• Connectivity with other centers in the region</li> <li>• Relationships with community education partners at the high school and university level</li> <li>• Continuum of care</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Lack of marketing budget and capacity</li> <li>• Lack of online presence and website quality</li> <li>• Lack of published public opinion and positive reviews</li> <li>• Lack of staff capacity</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Partnerships with regional employers and training centers</li> <li>• Ability to serve a lot of people across a large range of disciplines and industries</li> <li>• Attracting clientele and increasing use of WorkOne services</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• State oversight and overprotectiveness</li> <li>• Lack of marketing funding</li> <li>• Breakdown in regional communication and cooperation</li> </ul>

Website maintenance and regularly updating the regional workforce board is an obvious way that WorkOne centers can connect jobseekers with employment throughout the region. After an in depth overview of regional WorkOne websites throughout the state, it is evident that Southwest Central Indiana has the least developed and maintained site. Other WorkOne sites maintain an

updated and descriptive calendar of upcoming trainings and events located throughout the region at various WorkOne centers. Regional WorkOne boards also appear to be well organized and maintained, updating policy changes and including meeting minutes from regional Workforce development meetings. Improvement in mapping of WorkOne centers throughout the region with Google maps next to a clear presentation of location and hours of operation may also be a worthwhile update to the Southwest Central Indiana website. Additionally, customer service reviews and annually posting success stories from clients may increase usage of WorkOne services.

## ***Best Practices***

Many best practices exist both within Regions 8 and 11 and in other WorkOne regions throughout the state. The below practices have been identified as those with the greatest current impact and greatest potential for further impact if focused on throughout Southwest Central Indiana.

- WorkKeys – an independent job skills assessment system that helps employers select, hire, train, develop, and retain a high-performance workforce. This series of tests measures foundational and soft skills and offers specialized assessments to target institutional needs. Without dedicated staff, the Bloomington WorkOne office alone assesses 3500 people a year, the 2<sup>nd</sup> largest number in Indiana.
- ACT Certified Work Ready Communities – Operated concurrently with the WorkKeys assessments, this designation means that counties are “demonstrating with irrefutable data they have a skilled workforce that is valued by their local industry and a workforce development system in place that links education and workforce development together, aligns to economic development and matches people to jobs”. So far, the only county in Indiana to achieve this designation is Rush County. Application is done on the state or county level, and involves sending representatives to the ACT Work Ready Communities Academy for training and provision of resources. Richard Rampley, Operations and Business Services Director for WorkOne Region 8 has indicated that up to 6 counties in the SWC region would likely receive immediate certification should they apply.
- WorkINdiana referrals - The WorkINdiana program allows adult learners to earn a high school equivalency certificate or improve skills in an Adult Education classroom. Certifications are offered in areas such as Advanced Manufacturing, Business Administration and Support, Health Care, Hospitality, Information Technology, or Transportation and Logistics. At this stage, 311 career certification programs are operating at 67 locations in cities across the state.
- CNC Machining Training Courses – Regional training centers offering specific courses for CNC Machining in close partnership with interested employers, guaranteeing employment after completion of the program

- Regular regional management and leadership meetings – there is a continuous dialogue between Region 8 WorkOne centers including staff who have specific regional roles. Whilst similar information sharing relationships exist between WorkOne regions, they are not as formalized.
- Mini Job Fairs – Organized with and centered on a single employer, emphasizing the capacity of one regional or local employer to employ a number of people and provide the requisite on-the-job training if they can be connected with potential applicants. WorkOne Bloomington has achieved significant success with this model.
- Online testimonials – Positive reviews and descriptions of results achieved through WorkOne interventions and programs serve to increase interest and faith of jobseekers in the effectiveness and viability of WorkOne services.

## ***Challenges***

Many challenges exist in the successful expansion and implementation of new processes within the WorkOne centers. Key challenges to overcome include:

- Obtaining marketing funding – State funding for these centers is limited, and as a result marketing is generally done through cost effective and traditional means such as printed flyers. An increase in the marketing budget would likely have to come from a range of public and private sector partners, or occur in cooperation with other regional agencies with greater marketing capacity.
- Hiring web development expertise and staff to maintain new website – Current staff have many additional roles, and funding and staffing limitations prevent assigning dedicated marketing employees.
- Maintaining effective social media presence in accordance with state rules and regulations – Can be complicated to operate an effective social media presence with state oversight.
- Ensuring all regional voices are heard and sites are treated equally – Smaller communities need to have equal voices and equal access to services. Staffing, funding and client participation issues can make this difficult.

## ***Recommendations***

1. Pursue additional state funding or the possibility of private partnership funding for new and increased marketing initiatives
2. Overhaul the website including the addition of up-to-date online calendars, training and class schedules and testimonials. Increase functionality to provide clients with the ability make appointments and register for services remotely
3. Hire interns from area colleges or high schools for marketing, social media and web development and maintenance
4. Create a systematic process for the sharing of practices and techniques between WorkOne regions
5. Pursue accreditation as an ACT Certified Work Ready Community for all 11 Counties

# Stem Initiatives: A Non-Profit Approach

This section will outline the current state of STEM education in the United States, compare it to other countries, and discuss why it is critical to fulfilling regional and nationwide workforce development needs. Then potential solutions to the current situation will be explored in detail, including STEM programs and initiatives that may be useful to the region of focus. The section will conclude with a summary of proposed solutions to meet regional workforce development needs.

## *STEM Education in United States vs. Other Countries*

When compared to other developed countries, the quality of science, technology, engineering and mathematics (STEM) education in the United States is considerably lacking. The World Economic Forum ranks the United States 52<sup>nd</sup> in its quality of mathematics and science education offered to students.<sup>2</sup> In addition, the United States ranks 27<sup>th</sup> among developed countries in the proportion of college students earning undergraduate degrees in science or engineering.<sup>3</sup> Currently, more foreign students are studying in United States graduate schools than U.S. students, while two-thirds of engineers who receive PhD's from U.S. universities are not U.S. citizens.<sup>4</sup> Thus, the United States is becoming increasingly dependent on foreign scholars to fill workforce and leadership voids, primarily due to the decline in homegrown STEM talent.

Many experts feel the United States' position as a global leader is at risk due partially to the relatively few American students that are currently pursuing expertise in the fields of science, technology, engineering, and mathematics. In fact, only about 16 percent of American high school seniors are deemed "proficient" in mathematics and interested in pursuing a STEM career.<sup>5</sup> Among those students who decide to pursue a college major in the STEM fields, merely half of them choose to work in a related career.<sup>6</sup> Another concern pertains to the inadequate number of teachers skilled in teaching these subjects. According to Stella Royal, an administrator in the Bloomfield School District, finding qualified instructors to teach these courses has been extremely difficult. The Bloomfield School District has cycled through three STEM instructors in the same number of years. Mrs. Royal stressed the importance of continuity and consistency in

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<sup>2</sup> "How Does U.S. Compare to Other Countries in STEM Education?" Level Playing Field Institute, Web. 22 Apr. 2015. <<http://www.lpfi.org/how-does-us-compare-other-countries-stem-education>>

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Bertram, Vince. "Industry, Educators Build In-Roads to STEM Success." US News. U.S. News & World Report, 15 Aug. 2012. Web. 22 Apr. 2015. <<http://www.usnews.com/news/blogs/stem-education/2012/08/15/industry-educators-build-in-roads-to-stem-success>>

<sup>6</sup> Ibid.

STEM instruction in order for these initiatives to be successful and to give students confidence in such programs. For this to happen, schools need access to properly trained STEM teachers.

Overall student interest has been gradually rising over the past decade, as 1 in 4 of all high school students were excited about pursuing a STEM major or career.<sup>7</sup> The main challenge, however, is keeping high school students attracted to such subjects. Even though the number of science and engineering jobs is expected to dramatically increase in coming years, approximately 60 percent of the nation's students who begin high school interested in STEM change will their minds by graduation.<sup>8</sup> Therefore, it is imperative to find ways to attract students to STEM learning and maintain their enthusiasm and interest in such areas.

The demographics of students attracted to STEM fields suggest a significant gender and race gap. For example, male students are more than three times as likely to be interested in STEM as their female counterparts, and the gap appears to be widening.<sup>9</sup> Also, across the country, Hispanic and African-American high school students have consistently lagged behind their Caucasian and Asian peers in STEM engagement.<sup>10</sup> Recruiting and retaining underrepresented populations will be crucial to satisfying workforce needs and filling the increasing number of science and engineering jobs in upcoming years.

### ***Importance of STEM Education Initiatives***

Implementing and maintaining STEM initiatives will become even more important in upcoming years. Estimates show the United States will have over 1.2 million unfilled jobs in science, technology, engineering, and math by 2018.<sup>11</sup> Moreover, STEM jobs are expected to grow by 17%, which is nearly double the rate of jobs in other sectors.<sup>12</sup> More than 70 percent of STEM jobs in the future are projected to be in computing, including software engineers, computer networkers, and system analysts.<sup>13</sup> These jobs will require properly trained workers with the appropriate skill sets. A chief concern is that there will be an abundance of unfilled positions accompanied by a population that is neither qualified nor prepared to fill them. Initiatives aimed

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<sup>7</sup> Morrella, Michael. "Many High Schoolers Giving Up on STEM." US News. U.S. News & World Report, 31 Jan. 2013. Web. 22 Apr. 2015. <<http://www.usnews.com/news/blogs/stem-education/2013/01/31/report-many-high-schoolers-giving-up-on-stem>>

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> "Dow and Project Lead The Way Partner to Grow STEM Skills in Key Dow Communities." PLTW. Project Lead the Way, 24 Feb. 2015. Web. 22 Apr. 2015. <<https://www.pltw.org/news/items/201502-dow-and-project-lead-way-partner-grow-stem-skills-key-dow-communities>>.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

to improve student achievement through the implementation of new K-12 education standards in math and science, the creation of specialized STEM high schools, and partnerships between educators and businesses to address skills gaps will become even more important in coming years.

STEM education initiatives can yield other positive benefits as well. The data and research in the field suggests that students prepared in STEM-related disciplines enjoy higher starting salaries and lower unemployment rates than the population at large.<sup>14</sup> Many proponents of STEM education also suggest that an education based solely on the basics, such as reading, writing, and arithmetic does not adequately prepare future citizens to compete and succeed in the technological world. By requiring all students to study STEM disciplines, proponents argue that students will gain a more relevant and meaningful set of skills that prepares them for the future. 16.8 percent of Radius' region's workforce and 11 of the top 17 employers are related to manufacturing. Further implementation and maintenance of STEM initiatives as well as increased student engagement could go a long way in helping students acquire the skills necessary to fill such positions.

### ***Potential Solutions for Current Situation***

Project Lead The Way (PLTW), based in Indianapolis, IN, is the nation's leading STEM provider, which delivers STEM programs to more than 6,500 elementary, middle, and high schools across the country.<sup>15</sup> University researchers have found that compared to non-PLTW students, PLTW students outperform their peers, are better prepared for post-secondary studies, and are more likely to consider careers as STEM fields.<sup>16</sup> PLTW approaches include collaborations with students, teachers, administrators and experts, as well as research and problem based programs, which prepare students to solve problems through knowledge application and leading their own learning.<sup>17</sup>

According to Stella Royal, the Bloomfield School District offers PLTW courses in its school system, such as introduction to engineering design, civil engineering, and principals of engineering. In 8<sup>th</sup> grade, the nine-week engineering technology classes provide students with basic information and help generate interest in related high school classes. However, Stella Royal points out that the main barriers for implementation of PLTW courses in the Bloomfield School District relate to a lack of PLTW certified teachers and the high cost of PLTW classes

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<sup>14</sup> Tai, Robert H. (2012). *An Examination of the Research Literature on Project Lead the Way*, Project Lead the Way.

<sup>15</sup> Project Lead the Way, "About PTLW", <<https://www.pltw.org/about-pltw>>

<sup>16</sup> Project Lead the Way, "Our Impact", <<https://www.pltw.org/about-us/our-impact>>

<sup>17</sup> Project Lead the Way, "Our Approach", <<https://www.pltw.org/about-us/our-approach>>



(e.g., keeping equipment up to date). In addition to the Bloomfield School District, PLTW certified schools in Southwest Central Indiana include Jasper High School, Washington High School and Linton High School. Related research also identifies the main barriers to PLTW program implementation being high costs and teachers' resistance to change for technology education.<sup>18 19</sup>

Edison Middle School in Southern Wisconsin is a prime example of PLTW program implementation.<sup>20</sup> At Edison, educators create an integrated STEM experience for all 7<sup>th</sup> and 8<sup>th</sup> grade students by incorporating PLTW's Gateway to Technology (GTT) program. One highlight of this integration is the creation of the STEM Continuum Model. The STEM Continuum Model allows teachers to incorporate many PLTW project and inquiry-based approaches into math and science courses already being taught, while the school develops a culture emphasizing the value of STEM-related learning. The model also includes selecting and supporting a strong PLTW instructional team and reaching out to local businesses to gain support.

## ***Proposed Solutions***

"Prepare And Inspire: K-12 Education In Science, Technology, Engineering And Math (STEM) For America's Future in 2010", a report to the president, recommends enhancing STEM education through the building of common standards in STEM subjects, recruiting and training STEM teachers, creating STEM-focused schools, driving innovation in STEM educational technology, and creating more outside-classroom STEM activities for students.<sup>21</sup> Supporting and building strong STEM teachers is extremely relevant to the current situation facing the SWC region of interest. As the difficulty Stella Royal pointed out in finding certified teachers to implement PLTW and other STEM initiatives, it is essential for schools to recruit and train more certified and high quality STEM teachers. The schools can utilize reward systems to incentivize teachers to become certified, such as recognizing and rewarding excellent teachers.

We also recommend that school should incorporate STEM education into early education systems, particularly in elementary schools and middle schools. It is better for students to become familiar with STEM education at an early age in order to produce greater interest and comfort levels later in their academic careers. PLTW demonstrates a good example for developing STEM programs in early education schools. It implements the PLTW Launch

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<sup>18</sup> Shields, C.J, (2007). *Barriers to the Implementation of Project Lead the Way as Perceived by Indiana High School Principals*, Journal of Industrial Teacher Education, Vol. 44, No. 3.

<sup>19</sup> Rodgers, George & Mahler, Marty, (1992). *A Comparison of the Acceptance of Technology Education between Idaho and Nebraska Teachers*, American Vocational Association

<sup>20</sup> Meeder Consulting Group, (2012). *The STEM Schools Project: Case Study, Edison Middle School*, <<http://nc3t.com/documents/EdisonCaseStudy.pdf>>

<sup>21</sup> President's Council of Advisors on Science and Technology, (2010). *Report to the President: Prepare and Inspire: K-12 Education in Science, Technology, Engineering and Math (STEM) for America's Future*, <<https://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stemed-report.pdf>>

program for K-5 students, which includes 24 modules aligned to grade-level standards, introducing basic knowledge of physics, biology, astronomy, geology, computer science, robotics and automation.<sup>22</sup> In addition, there is the PLTW Gateway To Technology (GTT) program for middle school students, which introduces students to key technology concepts through foundation and specialized units. The foundation units include design and modeling, and automation and robotics while specialization units include introduction to computer science, energy & the environment, flight and space, green architecture, and the “magic of electrons”.<sup>23</sup> Although not all schools can integrate PLTW programs into their curricula, they can refer to the modules and contents included in PLTW programs and improve their own STEM education.

Another consideration for the SWC region should be more consistent contact between regional employers and community schools. This has proven to be an effective strategy for the Bloomfield School District, as it has established a close working relationship with NSWC Crane. The partnership has allowed Bloomfield classes to visit Crane on day-long field trips in order to become familiar with the opportunities available at the naval base. Crane representatives have also visited classrooms to talk with students and participated in after school tutoring sessions with students. Increasing the number of partnerships in the SWC region could spur interest in STEM fields and introduce students to regional career opportunities at a young age. These partnerships could also provide older students a chance to participate in job shadowing and extracurricular opportunities as well as part-time positions that provide first-hand perspective and experience. Designating a school counselor as the point of contact in these partnerships would ensure consistent communication between the school and employer and help facilitate such partnerships.

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<sup>22</sup> Project Lead the Way, (2014). *2015-16 Launch Module Descriptions*, <<https://www.pltw.org/sites/default/vfiles/2015-16%20PLTW%20Launch%20Module%20Descriptions.pdf>>

<sup>23</sup> Project Lead the Way, *PLTW Gateway Curriculum*, <<https://www.pltw.org/our-programs/pltw-gateway/pltw-gateway-curriculum>>

# **Afterschool and Summer Education: Privately Funded Programs**

This portion of the Workforce Development initiative will consist of a comprehensive set of extracurricular activities to engage and prepare elementary school, middle school and high school students to enter the workforce community of Southwest Central Indiana. The components include mentoring, internships, technical education, soft skills and career placement coordinated with partnerships with industry leaders of the region.

The *Career Ready Outreach Initiative* report prepared by Thomas P. Miller & Associates emphasizes building relationships between students and parents, school staff and employers. The following program recommendations build on the implementation of such a relationship to foster job eligibility preparation of current students. The purpose of these program recommendations is to ensure that students are well prepared for employment opportunities in regions that have high employment demand.

## ***Existing Regional Programs***

The state of Indiana currently operates Youth Afterschool Programs for K -12 youth throughout the state. These programs are also known as Out-of-School Time programs (OST) that “offer a wide range of hands-on learning and enrichment opportunities beyond school hours that prepare children and youth for success in school, work, college and life.” (Indiana Afterschool Network).

These programs are offered throughout Indiana communities and include activities such as “building robots, creating art, solving real-world problems, being part of a team, exploring the world around them, contributing to their community, and preparing for college and careers (Indiana Afterschool Network). Through the Indiana Afterschool Network website, parents and students can become aware of many programs provided across different counties in Indiana State.

At present, the 11-county Southwest Central Indiana region has implemented 22 different programs across the eligible K-12 population. Generally, a program is provided for one county, however, some of them are offered across multiple. Most programs focus on children from grades K-6 and only two programs cover the K-12 population. Almost all of the programs are designed for afterschool tutoring, sports activities, childcare, reading and writing, or games while some programs provide opportunities for science related activities such as computer labs.

Additionally, select programs offer opportunities for leadership skills development or are tailored for children with physical and mental disabilities (See Table 2).

*Table 2: Existing Regional Afterschool Programs:*

<b>PROGRAM NAME</b>	<b>ACTIVITIES</b>	<b>AGES SERVED</b>	<b>COUNTIES SERVED</b>
<i>A Kid's Place</i>	Camp runs; Crafts; Interactive games	Kindergarten – 6 <sup>th</sup> grade	Dubois
<i>ABC's &amp; 123's Daycare</i>	Kindergarten readiness; Tutoring and homework assistance	Kindergarten – 6 <sup>th</sup> grade	Washington
<i>ABC-Stewart Montessori School</i>	Individualized instruction of math, science, language arts, reading, Spanish, history, geography, music, art, technology, and PE	Kindergarten – 6 <sup>th</sup> grade	Brown; Monroe
<i>Anderson Woods Summer Camp</i>	Service for children and adults with physical and mental disabilities	Kindergarten – 12 <sup>th</sup> grade	All eleven counties
<i>Boys &amp; Girls/ C.A.R.E. Program</i>	Homework help; Tutoring; Academic enrichment activities	Kindergarten – 6 <sup>th</sup> grade	Crawford
<i>Brown County YMCA Day Camps</i>	Games; Outdoor adventures; Arts and Crafts; Field trips	Kindergarten – 7 <sup>th</sup> grade	Brown; Monroe
<i>Camp R.O.C.K.S! – Easter Seals/Crossroads</i>	Overnight camp	5 <sup>th</sup> grade – 12 <sup>th</sup> grade	All eleven counties
<i>Cathleen's Kid Care</i>	Indoor activities; Preschool; Summer camp; Before/after school care	Kindergarten – 8 <sup>th</sup> grade	Greene; Monroe; Owen
<i>Daviess County Family YMCA</i>	Mentoring; Tutoring homework; Learning activities; Summer camp	Kindergarten – 6 <sup>th</sup> grade	Daviess
<i>Girls Incorporated of Monroe County</i>	Focusing on girls - Learning activities; Sports; Personality/characteristics	Kindergarten – 12 <sup>th</sup> grade	Monroe

	development		
<i>Hoosier Uplands 21<sup>st</sup> CCLC Afterschool</i>	Literacy and reading skills	Kindergarten – 5 <sup>th</sup> grade	Lawrence; Orange; Washington
<i>In His Hands Daycare</i>	Outdoor activities; Field trips	Kindergarten – 8 <sup>th</sup> grade	Martin
<i>Jameson Camp Youth Leadership</i>	Leadership skills development	7 <sup>th</sup> grade – 12 <sup>th</sup> grade	All eleven counties
<i>Kid City</i>	Field trips; Swimming	Kindergarten – 7 <sup>th</sup> grade	Brown; Greene; Lawrence; Monroe; Owen
<i>Kids Zone</i>	Snacks; Homework assistance; Crafts; Games; Computer lab; Movies; Outdoor play	Kindergarten – 6 <sup>th</sup> grade	Greene
<i>MCCSC Afterschool EdVentures</i>	Academic activities	Kindergarten – 6 <sup>th</sup> grade	Monroe
<i>Rainbow’s End Child Care Center</i>	Character building; Homework help	Kindergarten – 7 <sup>th</sup> grade	Crawford
<i>Rainbow’s End Pre-school and Child Care Center</i>	Learning activities	Kindergarten – 5 <sup>th</sup> grade	Crawford
<i>Summer Advantage USA</i>	STEM; Sports; Mentoring; Learning activities; Field trips	Kindergarten – 6 <sup>th</sup> grade	All eleven counties
<i>Tri-County YMCA</i>	Childcare; Leadership skills development; Academic activities	Kindergarten – 6 <sup>th</sup> grade	Dubois
<i>Union Hospital Child Development Center</i>	Childcare; Summer program	Kindergarten – 6 <sup>th</sup> grade	Greene
<i>WISH a program of the United Way of Daviess County Education</i>	Literacy skills development	1 <sup>st</sup> grade	Daviess

## ***Strengths of Existing Programming***

- Multiple programs in one county are provided, thus providing parents and children with many different options
- Programs offer a lot of interesting activities giving children the opportunity to pursue new interests outside the classroom
- Different programs are offered periodically throughout the state, in accordance with school vacations and seasons.
- Programs concentrate on academic with tutoring and mentoring available to improve children's learning ability and skills
- Programs provide a safe and comfortable environment for children.

## ***Weaknesses of Existing Programming***

- Not comprehensive – programs tend to focus on academic achievement at the exclusion of other services
- Lack of centralization
  - Opportunities are provided by different organization or programs
  - Several similar programs are provided in the same area by different organizations.
- Not workforce focused --- little to no career development or awareness programming is offered for students through the existing programs
- Lack of technical educational opportunities --- Programs are geared more toward literacy skills or homework assistance, rather than STEM and Career Technical Education opportunities

Table 2 indicates that most programs are designed for tutoring homework and academic skills development, meaning that in their current form they are not sufficient to adequately prepare students to enter the Southwest Central Indiana workforce in accordance with regional needs.

## ***Best Practices***

An example of quality Afterschool programming is the Science Bound Program at Purdue University. In 2002, Purdue University pioneered this new solution to address the lack of STEM education opportunities for Indiana school children. “Science Bound brings together resources from Purdue University, the Indianapolis Public School (IPS) system and the local business community” (Science Bound Program Purdue University, 2011). It also brings together critical stakeholders for a complete education, including students, parents, teachers, private industry partners, university faculty and staff. Partnering with local businesses and IPS helps to better prepare students for STEM careers. The Science Bound program has 4 main components: After School Workshops and Activities; Summer Camps, Internships, and Other Events; such as Parent Programs; and College Programs. Through those four major components, Science Bound provides academic mentoring and tutoring, STEM education, internships, and soft skills development.

Science Bound program develops efficient ways to help students succeed in terms of both academic success and career direction. It keeps the focus of students’ academic enrichment and it also includes the focus of their career development and is on the whole a more comprehensive program compared to most afterschool regional programs in Indiana. Additionally, while centralized around Purdue University, the program also extends services to different regions.

## ***Recommendations***

According to the research of the regional afterschool programs and the comparison of them with other successful programs, we have six recommendations:

### ***Partnership***

The key component to this combination of programs is that the funding and coordination is managed by the industry leading local businesses or companies that are facing a lack of eligible employees in Southwest Central Indiana. The partnership will consist of a relationship between these industries and local schools in the region so that the program can connect with students who are designated as potential employees for a corporation. The fund providers will be the industry leaders who are interested in investing in the developing workforce to help current students gain the experience and education necessary to obtain permanent employment with the local businesses once their secondary and technical education has been completed.

### *Mentoring*

The mentoring program should consist of one-on-one or small group mentoring sessions with K-12 students and experienced employees of industry leading firms. The purpose of this program is for representatives of companies in need of eligible employees to build rapport with potential employee bases and help students develop much-needed soft skills.

The mentoring relationships should begin with elementary school students and continue through high school to graduation. The mentors should consist of knowledgeable, skilled professionals with experience working with the industries that need qualified employees in Southwest Central Indiana. This mentoring relationship will familiarize students with the firms that seek qualified employee bases as the students become qualified potential employees and will also assist students in preparing for future job opportunities. They will be provided with the opportunity to learn about specific industry responsibilities, expectations, training requirements and positions. The mentoring sessions would occur on a regular basis, perhaps biweekly or monthly, to allow mentors to share experiences with students.

Potential challenges include requiring the program administration to connect with all or select local elementary, middle and high schools in the region. The implementation of a mentoring program would require an attempt to reach all or as many as possible targeted students to participate in the program. This would require an extensive effort on behalf of the program administrators.

### *Internships*

The internship component of the program will allow middle school and high school students to gain practical experience in specific industry sectors. The internships would take place during the summer vacation of each school year. Each year of the internship would build on previous experience to allow the student to progress toward the qualifications and skill set necessary to be prepared for permanent employment once the student has graduated high school or the necessary technical education program. The internships will be designed according to needs determined by the local business to allow students to learn and utilize the skills that will be needed once the student is able to be permanently employed.

### *Technical Education*

- Link classroom education to real-work experiences
- Make available more comprehensive information about the industries (employers) and their occupations



- Industries can have more well-prepared employees or potential employees and students can have more potential job opportunities.

This report details that STEM education is one of the urgent national concerns in America, causing a lack of available talent for the STEM workforce. Given regional concerns, we would recommend a greater emphasis on general technical education rather than general STEM education. The Southwest Central Indiana region already has many afterschool programs that focus in part or exclusively on STEM education.

This technical education programming will link classroom education to real-work experience. The educators will be professionals and experienced workers from local industries or partner companies, and students can learn from both class instruction and in a real work environment. Moreover, students can receive more complete information about the industries and their occupations.

### *Soft Skills Development*

Regional stakeholders have indicated that often the most challenging component of finding suitable employees is a lack of behavioral, communication and other “soft skills”. The development of these soft skills through afterschool and summer programming is essential for complete regional workforce development.

Through soft-skill focused sessions, students can learn how a professional and cooperative attitude can impact their jobs, how to write an appropriate resume and cover letter, the appropriate and presentable appearance of a good employee, and how to develop communication skills and public speaking skills. In addition to, students will receive real life educational examples of the consequences of poor work attendance, punctuality, or generally unprofessional behavior.

### *Career placement*

One of the obvious weaknesses for existing regional afterschool programming is that it lacks specific career development and career information aspects. A career placement center in regional schools would assist in guiding students to their future career development and could help students connect their academic studies with their future jobs. We recommend that this comprehensive set of programs include a career placement component that has staff specifically available to place high school and technical college graduates with hiring local businesses. Career placement focuses more on high school and technical college graduates rather than general college placement. With mentoring, internships, technical education and soft skills development for the K-12 grades, they will be well prepared both academically and in terms of behavior, personality and attitude. Thus, when they reach their graduation after high school or after technical college education, they can find appropriate jobs through the career placement offered directly through these programs.

# Program Evaluation: Pre-Screening & A New Approach

## *Why is Evaluation Necessary?*

Evaluations allow for the assessment of past, current, and proposed workforce development programs according to workforce and industry trends. Evaluations can be used to determine what techniques are successful and which should be avoided. They have the ability to measure program effectiveness as well as progress over time. The implementation of an evaluation template represents an agency's desire to learn from previous missteps, improve current processes, and avoid future failures. Evaluations also reflect an agency's concern for measureable results and accountability. Below is a description of how and why evaluations can be used for past, present, and proposed workforce development programs.

### *Past Programs*

The evaluation of a past workforce development program provides an agency the opportunity to avoid duplicating previous failures. It is an opportunity to determine how, why, and when a program failed and adjust current or future programs accordingly. It also offers a chance to find similarities amongst successful programs and again adjust current or future programs accordingly. An accurate evaluation of past programs can save money, effort, and resources in the long-term as it allows for more efficient and effective implementation of current and future programs.

### *Current Programs*

When an evaluation is used on current programs, it has the ability to act as a progress report. In this situation an evaluation can be utilized to identify potential areas of improvement, new risks, and/or changing needs. When used as a progress report, an evaluation can measure the effectiveness of current strategies and provide program leaders with evidence necessary to institute change. If the productivity of a current program was being challenged or if a current program was facing termination, then an evaluation could be used to prove the worth of a program. Current programs that regularly conduct evaluations have the opportunity to adjust strategies and improve effectiveness on a short-term basis.

### *Proposed Programs*

At this stage, an evaluation allows overseeing agencies to determine the potential success of new programs according to best practices and previous findings; therefore, it allows an agency's selection process to be more objective. Agencies can use prior knowledge as guidance for accepting or rejecting proposed programs. When evaluation occurs prior to program

implementation, the program's leaders must provide substantial evidence of potential success, as well as, developed, thoughtful responses to potential issues. These evaluations provide the opportunity to potentially highlight proposed program limitations that were never considered, sending proposals back to the drawing board. Evaluation prior to program implementation eliminates programs that are inadequately prepared and deters program leaders from submitting applications for incomplete or shallow programs. When programs are evaluated before they are approved, the success rate of implemented programs will greatly increase.

## ***Evaluating Program's Effectiveness: Best Practices and Findings***

### *Guide to Giving Workforce Development*

Social Impact Research (SIR) developed a guide to help people to assess the effectiveness of the nonprofits. SIR identifies the best approaches for addressing the targeted social issue and suggests a five-step process to properly evaluate associated programming. These 5 steps are:

1. Understanding the recommended approaches
2. Evaluate the program's effectiveness through four components: technical training, preparation, complementary social services, and outcomes.
3. Evaluate the organization's health and stability
4. Assess the program's ability to create systemic impact
5. Interpret the evaluation and determine how to provide support & recommendations

For step 2, under each component, SIR listed the effective implementation and its corresponding ineffective implementation to state what criteria should be followed. For example, in evaluating the quality of employment preparation and placement, SIR listed "Placement staff begin working with participants early in the program and continue to meet throughout" as an effective way, and it listed "Placement staff begin assisting participants with job searches toward the end of the program" as an ineffective way. This helps assessors to measure programs on simple criteria. The additional steps seek to objectively evaluate the organization's ability to create, sustain and improve a successful, well-thought out and well-financed program.

### *Kirkpatrick's Four Levels*

The State of Washington's Employment Security Department stated that Kirkpatrick's model is a widely used and popular model for the evaluation of training programs (2010). There are four levels of the model:

1. Reaction
2. Learning
3. Behavior
4. Results.

First, reaction is used to measure customer satisfaction, helping to understand a trainee's response to workshops and related program experiences. Secondly, learning quantifies the amount of knowledge imparted by a program. It can take a control group and treatment group approach in order to estimate the knowledge or skills learned in a program. Third, behavior is used to measure soft-skill and attitude developments as a result of program participation. Lastly, the results step seeks to measure the overall results of a program. This can be hard to do because an overall conclusion is not easy to divine from many small components.

Radius can build a particular evaluating model for south central Indiana, like the template provided in this report, but it will need to consistently evaluate all prospective and available programming in order to be effective.

### *Fundability*

There should be a financial requirement for applications for the future, so that Radius and other reviewers can easily determine how realistic a program's costs are, and whether the proposal is financially viable from the outset. Solid financial operation is critical. Financial reports and statements can reflect the financial condition of the organization while a simple set of ratios analysis can reveal additional information about the applicants. Marco Carbajo listed business credit reports as a way to determine the fundability of businesses. Some stakeholders may get credit reports from credit agencies such as Dun and Bradstreet to review company's credit history (2012). Finally, programs should have a clear financial mission and goals.

### *Realistic Expectations*

Programs should have multiple, competent partners who are able to contribute significant resources and support to the developing organization. In the Washington 2011 Best Practices Awards for Workforce and Economic Development, every awarded program had more than four partners. These included colleges, other training programs, and government subsidiaries. A

successful program has to obtain all the resources possible to promote its development. Additionally, transparency and accountability must be important components of evaluation to ensure that program expectations are not being inflated or hidden.

### *Implementation*

Providing participants with post-graduation support can be helpful. The goal should be more than teaching skills, and focus on developing the workforce and economic development. Trainees may not be fully independent after the training, and may need some help on finding jobs and additional preparation assistance or may want to re-train and gain additional skills after they obtain higher-level jobs. In fact, Aring and Corbitt found that training should meet trainees at many levels. There should be options available to trainees including options to make varying levels of commitment to the program (1996). Therefore, graduation from training should be only the beginning of a program's continuum of care. Additionally, effective monitoring of program performance is essential to any quality evaluation process as performance management in action can support programs to learn and improve

### *Skill Oriented*

Eyster, Anderson, and Durham from the Urban Institute stated that encouraging collaborative efforts to better connect employers with workforce programs and services was important to effectiveness for programs. Sector strategies and industry-recognized credentials could help trainees' success (2013). In fact, regional partnership is essential to connect employers and trainees, and to enhance their career opportunities.

On the other hand, programs should not only concentrate on one skill but also on cross-industry skills. Cross industry skills are soft skills, Eyster described them as showing up to work on time, dressing appropriately, or being able to communicate verbally and in writing (Eyster et al. 2010). Trainees will need those skills in any job, and focus on these skills will result in well-rounded, well-prepared program graduates.

## ***Evaluation Template for Proposed Programs***

The following evaluation template, found online [here](#), is a tool created for the assessment of incoming workforce development programs in Southwest Central Indiana. The questions asked are meant to generate thoughtful responses that help Radius gauge the program's realistic impact on the region. These questions are meant to highlight the program's strategic objectives, potential limitations, measurement techniques and overall effectiveness.

### **General Information**

1. What is the name of your organization?

2. Proposed Program Type (job training, soft skills development, etc.)

3. Choose the industry (or industries) you intend to impact

- Tourism
- Manufacturing
- Education
- Finance
- Other

4. Is this a new or existing program?

- New
- Existing

5. What is the scope of your proposed program?

6. What population do you intend to impact?

7. What is the estimated number of participants at any one time?

- 1-25
- 26-50
- 51-75
- 76-100
- 100+

8. What is the estimated number of participants annually?

- 1-25
- 26-50
- 51-75
- 76-100
- 100+

9. What are the means of impact?

- Workplace
- Training Centers
- High Schools
- Middle Schools
- College/Universities
- Vocational Schools

10. Please provide a timeline for progress at both the organization and participant level.

**Strategic Objectives**

11. Identify your program's key outcomes.

12. How do your program’s objectives correlate to the overall programming in Southwest Central Indiana?

13. What is the organizational structure of your program? Are there any current or potential partnerships to note? Does your program work alongside any other workforce programs?



14. Which of the 11 counties in Southwest Central Indiana will be affected by your program's implementation?

- Brown
- Crawford
- Daviess
- Dubois
- Greene
- Lawrence
- Martin
- Monroe
- Orange
- Owen
- Washington

15. Please provide examples of potential impact in each of the counties chosen above.

Brown:

Crawford:

Daviess:

Dubois:

Greene:

Lawrence:

Martin:

Monroe:

Orange:

Owen:

Washington:

16. Is there an opportunity for program extension to other geographic or economic areas? If yes, please describe details as to how and when.

**Funding Sources**

17. What funding sources have been secured for program implementation?

18. Please note any other potential funding sources for future use.

19. Do you foresee any risks associated with the identified funding sources?

**Measurement Techniques**

20. What intake assessments will occur? How will participants be measured or accounted for at the beginning of the program?

21. Will measurement be according to technical skills, softs skills, or some combination?

22. What data sets will be used to measure effectiveness? Are these data points found at the individual level? Organizational level? Community level? Regional level? How will you access these such data sets?

**Limitations**

23. What are the proposed programs potential areas of need?

24. How flexible is your program to changing environmental needs?

# IU Rural Center of Excellence

## **Executive Summary**

This report examines the potential for a Rural Center of Excellence (RCOE) at Indiana University. Specifically, the report provides a condensed background on the eleven-county Southwest Central (SWC) Indiana Region, suggesting four focus areas and research relevant to this rural region. The report concludes by summarizing the various opportunities and challenges of a Rural Center of Excellence at Indiana University.

### *Background*

The eleven-county region at the center of this report and its recommendations include the following counties: Brown, Crawford, Davies, Dubois, Greene, Lawrence, Martin, Monroe, Orange, Owen, and Washington. These counties share similar resources, demographic characteristics, and challenges. Many of these were outlined in the Battelle Report: Strategic Plan for Economic and Community Prosperity in SWC Indiana, which found, among other things, that industrial growth is being hindered by a lack of skilled workers. Many other challenges exist, such as public health disparities, lack of general education attainment, a poor post-secondary education system, and a lack of job skill training.

### *Rural Center of Excellence Concept*

The Battelle report recommended that IU take a more active role in the SWC Indiana region by leveraging research strengths and specifically applying them to Naval Surface Warfare Crane's activities (Battelle Memorial Institute, 2014, p. 4). A deeper research partnership may be possible in the near future with the development of the IU School of Engineering. However, this group's recommendation is to further expand IU's activities through establishing a Rural Center of Excellence with greater breadth in subject-matter than a singular partnership between IU and Crane. While a partnership with Crane may fit into one focus area, this report suggests a holistic approach to address rural challenges through four focus areas. Each focus area was determined through conversations with external stakeholders from the region as well as internal stakeholders from the IU Office of the Vice President for Engagement.

## *Focus Areas*

Four focus areas are recommended for the center. These areas leverage Indiana University's current strengths, paired with new funding opportunities to address challenges identified in the eleven-county rural region. The following is a list of the areas, along with their associated potential grant funding sources.

1. Business & Cooperatives
  - a. Rural Business Research and Programming
    1. National Technical Assistance Project-University Centers (EDA)
    2. Federal and State Technology Partnership Program (SBA)
    3. Research and Evaluation Program (EDA)
  - b. Rural Cooperative Programming
    1. Rural Cooperative Development Grant (USDA)
2. STEM (Science, Technology, Engineering, and Math) Education
  1. Science Through Technology Enhanced Play (NSF)
3. Health and Substance Abuse
  - a. Rural Health Research and Programming
    1. Behavioral and Social Science Research on Understanding and Reducing Health (NIH)
    2. Innovative Measurement Tools for Community Engaged Research (NIH)
    3. Academic-Community Partnership Conference Series (NIH)
  - b. Substance Abuse Programming
    1. SAMHSA SBIRT Health Professions Student Training (HHS)
    2. "Now is the Time" Project AWARE-Community Grants (HHS)
4. Technology and Broadband
  1. Community Connect Grant Program (USDA)
5. Additional Opportunities
  - a. Energy
    1. Rural Energy for America Program Energy Audit & Renewable Energy Development Assistance Grants (USDA)
  - b. University
    1. IU Women's Philanthropy Council Grant (IUF)

There are significant funding opportunities for a Rural Center of Excellence (RCOE) at IU. These opportunities include operating support from the Economic Development Administration, project funding for improving rural connectivity from the USDA, and numerous rural health research grants from the National Institutes of Health. The RCOE provides a unique opportunity to create an interdisciplinary approach to addressing persistent problems in IU's own backyard. The report also details both ideas for programming at the center with regard to each focus area, with successful models for rural research and programming at other universities highlighted for comparison. The list of universities working on rural issues around the country is impressive. Indiana University could add serious value to the institution by investing in a Rural Center of Excellence and could greatly enhance the reputation and influence of the university amongst its peer institutions by focusing on local issues while continuing to serve as a global university

### *Conclusion*

The report concludes by reiterating the importance of Indiana University as a catalyst for the advancement of the people living in the eleven-county rural region. While the needs of the region are considerable, outside resources do exist which can be leveraged to further the advancement of the region. This capstone team recommends that Indiana University should create and implement a Rural Center of Excellence, as doing so would provide a model for replication throughout the state, advance the university's mission, and improve the Southwest Central Indiana community.

# Background

The Battelle Report provided a comprehensive look at eleven counties referred to as the Southwest Central Indiana Region including Brown, Crawford, Davies, Dubois, Greene, Lawrence, Martin, Monroe, Orange, Owen and Washington. The report identified five inter-related challenges confronting the region along with six strategic priorities that if effectively addressed will aid in overcoming existing economic challenges and create long term prosperity.

Battelle's identified challenges include

- Industrial growth is being hindered by a lack of skilled workers.
- The region has not taken advantage of the opportunity presented by the development of the I69 Corridor.
- Lack of robust, value added relationship between the region's two primary public research engines hinders the region's ability to compete in the global economy, and also puts at risk the ability to retain the institutions' world class assets in the future.
- Lack of sufficient entrepreneurial culture hinders economic growth, limiting economic diversification and the stability and opportunities such diversity brings to a community.
- Lack of regionalism hinders the coordination of efforts and does not allow for the benefits of critical mass (Battelle Memorial Institute, 2014, pp. ES-1).

Battelle's interconnected strategic priorities include:

- Advance a sense of regionalism
- Foster a high value quality of place
- Advance workforce development/talent through career immersion initiatives aligned with federal, state and local efforts
- Focus retention, expansion and attraction efforts on those industry clusters that provide the greatest opportunity for economic growth in the region
- Establish a collaborative applied research environment between Indiana's research universities and Naval Surface Warfare Center Crane to leverage each other's assets to help ensure global relevancy of research and regional economic growth
- Catalyze a robust entrepreneurial ecosystem and culture (Battelle Memorial Institute, 2014, pp. ES-2).



This capstone project focused on Strategy 1, “advance a sense of regionalism” and Action 3- “Create a rural development center of excellence at IU-Bloomington to leverage the unique international development, public policy and health policy expertise resident in the region and apply it to solving rural issues of today”. Priority for the creation of the rural development center of excellence is significant with a recommended planning process of one – three years and an implementation time frame of three – five years (Battelle Memorial Institute, 2014, pp. ES-6).

## ***Project Strategy***

Indiana University leadership sees the creation of the RCOE as a great opportunity. Partnering with the IU Office for Engagement, this group utilized four project strategies to assess the feasibility of the center in the current university environment.

- A. External Review: Review rural center models throughout the country and document programmatic and research projects that may be related to the recommendations in the Battelle report.
- B. Internal Review: Create an inventory of contacts and resources related to creating a rural development center of excellence including faculty that may have an interest in pursuing research projects for such a center.
- C. Stakeholder Analysis: Meet with community leaders, elected officials, local, state, and federal organizations associated with rural development and other stakeholders who would benefit or have an interest in growing the prosperity of this region
- D. Funding Analysis: Research funding opportunities, specifically sustainable research and project grants related to rural issues in this region<sup>24</sup>.

## ***IU Bicentennial Strategic Plan Integration***

The IU Strategic Plan drives innovation and excellence in IU’s programs, policies, and partnerships. This team shaped the vision of the RCOE by aligning the University mission statement with several of IU President Michael McRobbie’s “Principles of Excellence” as detailed below.

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<sup>24</sup> Selected relevant faculty members are listed in the text of the report while a comprehensive relevant faculty list is provided in the appendix

### IU Mission Statement:

In creating “dynamic partnerships with the state and local communities in economic, social, and cultural development”, an IU Rural Center of Excellence could be a bridging institution. The RCOE would create partnerships between the university, local governments, rural community members, and local industry in the eleven-county rural region (Indiana University Trustees, 2014, p. 5)

### Principle of Excellence 3: Excellence in Research

The RCOE will “expand intercampus collaboration” by bringing the Kelley School of Business (KSOB), the School of Public and Environmental Affairs (SPEA), the School of Public Health (SPH), and the School of Education (SOE) together to coordinate rural economic development and research efforts (Indiana University Trustees, 2014, p. 18)

### Principle of Excellence 5: Excellence in the Health Sciences and Health Care

The RCOE will “improve Hoosier Health” by complimenting the high-level research being conducted at the IU School of Medicine and IU Health facilities by instead focusing on issues specific to the SWC Indiana rural region (Indiana University Trustees, 2014, p. 30)

### Principle of Excellence 6: Excellence in Engagement and Economic Development

In providing “education, expertise, innovation, and leadership” in these rural areas of Indiana, this center can provide an excellent example of building a “strong community” by “partnering with a community and region” (Indiana University Trustees, 2014, p. 32)

## ***Stakeholder Analysis Overview***

Project Strategy C—Stakeholder Analysis—required the capstone group to conduct numerous interviews with stakeholders in the community that have a vested interest in the prosperity of the region. These conversations shaped our view of the region and helped us develop focus areas for

the Rural Center of Excellence. The statements below summarize the most frequent sentiments of these respective stakeholders:

- The people living in this region are multi-generational and proud of their rural lifestyle.
- They are not easily convinced that they can aspire to “aim higher” without losing their rural identity.
- They can be cautious of “outsiders” coming into their community telling them what they need to do.
- They will embrace change if the change is led by one of their own.
- They want their children to be more successful than they are, but there is not a keen sense of urgency to improve the education system.
- Children that do go on to post-secondary education opportunities have limited reasons to return to the region.
- Access to broadband technology is limited.

Stakeholders in the region were also clear about the activities they see a RCOE undertaking:

- Provide hands-on program opportunities in the school system teaching the following skill sets:
  - Vocational skills and workplace etiquette
  - Technology
  - Leadership, public speaking, entrepreneurial and critical thinking
- Create new STEM curriculums beginning in kindergarten with measurable outcomes associated with learning.
- Start pilot programs in a portion of the eleven counties and then provide success stories and outcomes to procure additional funding opportunities in the remaining counties.
- Address public health issues like substance abuse and HIV, provide education classes on nutrition, chronic health conditions and increase access to primary care and behavioral health services.
- Bring broadband to the community with free or reduced fees for access.
- Provide technical assistance for local farms<sup>25</sup>.

With the voice of the stakeholders in mind, this team recommends the four following focus areas as well as some additional opportunities:

1. Rural Business and Rural Cooperative Development
2. Rural STEM Programs
3. Rural Health & Substance Abuse
4. Rural Technology and Broadband
5. Additional Opportunities

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<sup>25</sup>The appendix includes a comprehensive listing of the stakeholders interviewed; their collective sentiments are summarized in this section

# Rural Center of Excellence Focus Areas

This section details the four focus areas recommended by this capstone team. Additionally, each “Project Strategy” is listed under the focus area concepts where applicable. The team’s goal was to provide a comprehensive look at each focus area by applying all four project strategies—external review, internal review, stakeholder analysis, and funding analysis—to each focus area.

## ***Focus Area 1: Rural Business and Rural Cooperative Development***

### **Concepts**

#### *Rural Business*

The RCOE could conduct research on rural business best practices, producing recommendations and tools for business owners and entrepreneurs in the eleven-county rural region. Additionally, the center can provide hands-on consulting and training services to rural business owners. These consulting services could assist rural community members in practical areas such as building business skills and applying for federal business grants to improve their businesses.

#### *Rural Cooperative Development*

The center could include a rural cooperative development program that educates the local population on entrepreneurship and delivers training to improve or cultivate workers’ leadership skills required by the economic opportunities within the eleven counties. Community business owners can be educated on the nuances of created cooperative businesses to improve the economic success of the collective community. The cooperative program could even provide venture capital to qualified individuals and reimbursements to small business employers enabling them to afford the training sessions for their employees. IU can also conduct research projects on the cooperatives established in the rural communities to assess their impact as opposed to traditional business models.

### **External Review: Models for Rural Business**

The Louisiana Tech University’s Center for Rural Development (CRD) conducts research and develops projects based on its community needs, serving as a strong model for comparison. Accordingly, the center works closely with university researchers to implement projects, by

providing technical and financial assistance, identifying available funding resources, and connecting researchers to rural community partners (Louisiana Tech University, 2012).

The Western Rural Development Center (WRDC) at Utah State University is another comparative model. This center focuses on employing “people-based rural development” (Utah State University, 2011). Different from the Louisiana Tech’s CRD, the WRDC promotes research on not only economic development, community development, and natural resources development, but also rural population characteristics. In addition, the public can access regional data and annual reports on different issues through the center’s website (Utah State University, 2011)

Iowa State University’s Center for Agricultural and Rural Development (CARD), funded by U.S. Department of Agriculture, is research-focused initiative, emphasizing the application of the academic excellence. CARD’s research areas include trade and agricultural policy, resource and environment policy, food and nutrition policy, agricultural risk management policy, science and technology policy, and bio-renewables policy. Iowa State University’s research faculty and students work together to conduct this research (Iowa State University, 2014)

Northern Michigan University’s Center for Rural Community and Economic Development (CRCED) generates regional data and provides assistance to professors and students in Northern Michigan University by distributing annual grants (Northern Michigan University, 2015).

The Center for Regional Development at Purdue University (PCRD) seeks to address the economic needs of regional residents by generating decision-making data, and involves the stakeholders/leaders within the regions to develop regional strategies and plans, and implement related projects (Purdue University, 2015). The PCRD also emphasizes a balance among investments in the regions, by adopting a suite of programs (Purdue University, 2015)

Michigan State University launched the Center for Community and Economic Development (CCED) in 1969 (Michigan State University, 2015). CCED innovatively conducts research through case study analysis to extensive theoretical analysis and model development in order to solve local problems (Michigan State University, 2015).

## **External Review: Models for Cooperative Development**

In addition to traditional business research and programming, many universities have begun to implement services on cooperative development to their respective communities. Educational outreach on creating cooperatives paired with entrepreneurship training provides useful skills that can improve the economic vibrancy of the community.

Wichita State University established the Growing Rural Business Center (GRBC) to enhance entrepreneurship by offering quality education, research, and outreach programs to the local communities (Wichita State University, 2014). Faculty from management, entrepreneurship, family business, college of fine arts, college of engineering, college of education, college of liberal arts & science, college of health professions, school of art & design, and department of biological sciences are collaborating to develop and implement educational programs (Wichita State University, 2015).

Similar to the GRBC, the University of Illinois at Urbana-Champaign set up the East Central Illinois University Center (ECIUC) also with a focus on promoting and fostering entrepreneurship in the region. The center provides educational opportunities, assistance services, incubation, growth support, and technical venture capital support to the communities (University of Illinois Urbana Champaign, 2015). The CRD also provides reimbursements to small business owners to assist with the burden of education program fees (Louisiana Tech University, 2012).

In addition to the GRBC, ECIUC, and CRD's illustrations, the Small Business Development Center (SBDC) at the Ohio University serves as a good model for our center to refer for delivering financial assistance. The SBDC helps small business employers identify finance sources, loan applications, and develop financial projections for those in the community (Ohio University, 2015).

While some of the centers have emphasis on various economic issues, The Ohio Cooperative Development Center (OCDC) places high value on providing trainings on all types of cooperative business. The center provides conferences, workshops, and consulting services to the communities (Ohio State University, 2015).

## **Internal Review: Rural Business at IU**

While IU does not have a specific entity dedicated to rural business, several organizations focus on rural business issues in indirect ways. The Indiana Business Research Center (IBRC) serves as a research hub for the Indiana economy and business community. IBRC produces tools and research to be utilized by business owners to aid in making more informed business decisions. For example, the center recently released a report called “Beyond the Farm” focusing on the agricultural economy of Indiana (Kelley School of Business, 2015).

The Indiana University Public Policy Institute at IUPUI’s School of Public and Environmental Affairs provides research on the impacts of policy on businesses, nonprofit organizations, and more. This research group includes “Small town/Rural” as a focus area for their recent initiative “Thriving Communities, Thriving State” (Indiana University-Purdue University Indianapolis, 2015). Both organizations provide research on rural issues but lack programming and outreach to address them. The IU Rural Center of Excellence could exist in this implementation gap: applying academic research to solve issues in the defined eleven-county rural region.

## **Stakeholder Analysis**

The clear message from many stakeholder interviews was that we must empower the people who live in the region to “aim higher” (Skillman, 2015). The status quo of under achievement is inherent in the minds of the multi-generations that call SWC Indiana home. They simply do not know that they can achieve because they have not been given ample opportunity to explore options that will lead to greater prosperity. And while some will say the opportunities exist, they have not been introduced in such a way as to encourage citizens to take advantage of them.

In an extensive interview with Steve Ferguson, CEO of Cook Group, he stressed the importance of learning the culture of the region and finding local champions with an entrepreneurial spirit to spearhead new initiatives that will inspire others to follow (Ferguson, 2015). Bridging the leadership gap by offering capacity building and leadership training for local elected officials, local community leaders and small business owners is of utmost importance in furthering Strategic Priority 3- “Advance workforce development/talent through career immersion initiatives aligned with federal, state and local efforts” (Battelle Memorial Institute, 2014, pp. ES-2).

The IU Rural Center of Excellence can play a vital role in meeting the needs of this community by focusing on rural business initiatives. The faculty from the Kelley School of Business as well



as SPEA can provide ample opportunity for instruction in an array of subject matters that fits the Battelle report findings.

### **Funding Analysis: Rural Business Project Grants**

#### *National Technical Assistance Project-University Centers (EDA) CFDA # 11.303*

The Economic Development Administration's (EDA) National Technical Assistance Project-University Centers sub-grant provides the most promising funding opportunity for rural business activity at an IU Rural Center of Excellence. The direct language of the University Center Federal Funding Opportunity (FFO) states that the EDA seeks to, "invest in institutions of higher education to establish and operate University Centers to support initiatives that are focused on advancing: regional commercialization efforts; entrepreneurship; and a high-skilled regional workforce, provide technical assistance to public and private sector organizations with the goal of enhancing local economic development" through this grant (General Services Administration, 2015).

This grant provides the direct start-up support that a project of this magnitude warrants. The University Center grant operates on a five-year competitive cycle with the last awards being made four years ago. After speaking with Darrin Fleener, Chicago Region EDA Representative, we learned that the next funding competition will soon be announced for FY16. Darrin also informed us that the last university to receive funding for such an initiative in Indiana was Purdue for its Center for Regional Development (CRD) (Fleener, 2015). The funding for the CRD will end in FY16 allowing for a new group of Hoosier universities to apply. Funding amounts generally range from \$80,000-\$200,000 annually (Fleener, 2015). It is our recommendation that IU should seriously consider submitting an application in FY16.

#### *Federal and State Technology Partnership Program (SBA) CFDA # 59.058*

Utilizing IU's research strengths to improve business opportunities in the local communities was a key concern voiced by many of our stakeholders. The Federal and State Technology Partnership Program (FAST) from the Small Business Administration seeks to improve disadvantaged business owners' participation in federal research and innovation grant programs (Small Business Administration, 2015). If awarded to IU's Rural Center of Excellence, the FAST program would allow IU faculty, staff, and students the opportunity to work in the rural community to assist business owners in receiving federal funding to improve their operations.

The FAST program typically gives awards of up to \$100,000 to 20 recipients each cycle to conduct “outreach and technical assistance to science and technology-driven small businesses” (Small Business Administration, 2015). The University of Wisconsin’s *Wisconsin Entrepreneurs Program* provides a viable model for Indiana to replicate. UW received this grant in 2010 for their center to provide grant application consulting services to select businesses in the local area. These businesses were coached on how to apply for R&D grants from federal agencies such as the Department of Defense and the National Science Foundation (Portage County Business Council, 2011).

Project funding lasts for a full 12 months and each state is allowed one applicant per cycle (Small Business Administration, 2015). Indiana had no recipients in the last cycle, but it is unclear whether any applications were submitted for the state. Our recommendation for IU is to seriously consider this grant given the practical benefits offered to our rural businesses. However, coordination with the state and other universities must be seamless, as every state’s application must be approved by its governor’s office (Small Business Administration, 2015, p. 8).

### **Funding Analysis: Rural Business Research Grants**

#### *Research and Evaluation Program (EDA) CFDA #11.312*

The EDA’s Research and Evaluation (R&E) program provides funding for research on industry-leading economic development practices specifically focusing on regional competitiveness, entrepreneurship, and innovation (General Services Administration, 2015). IU faculty participating in the rural center could apply for awards through this program between \$100K and \$400K to conduct extensive research projects on business practices in the rural region (General Services Administration, 2015).

When we mentioned this program to Darrin Fleener of the EDA, he was unfamiliar with the program and did not think that it would provide funding in the next fiscal year (Fleener, 2015). Further investigation into the EDA’s research grants needs to continue as more grants are announced for the next fiscal year. This program provides a great opportunity for researchers at IU, but should not be relied on for funding due to its uncertain status.

The opportunities for EDA-funded rural business research at IU trail behind available project

grants. Fleener said in our interview that research simply for the sake of research does not receive funding from the EDA (Fleener, 2015). IU's best opportunity for research in this area is to tie it directly to the programs and projects of the Rural Center.

### **Funding Analysis: Rural Cooperative Development Grants**

#### *Rural Cooperative Development Grant Program (USDA) CFDA # 10.771*

The USDA's Rural Cooperative Development Grant is awarded to organizations seeking to establish "Cooperative Development Centers" focused on the creation and improvement of cooperative businesses in their communities of interest (USDA, 2015). The USDA often provides these awards to state universities to operate Cooperative Centers, with each state receiving funding for one center (e.g. Ohio State's Ohio Cooperative Development Center). The Ohio State Center provides consultation services, conferences, and workshops for community members who are interested in learning about and establishing their own cooperatives (Ohio State University, 2015).

Unfortunately, this grant currently goes to the Indiana Cooperative Development Center (ICDC) located in Indianapolis (Indiana Cooperative Development Center, 2012). After talking with Phil Lehmkuhler, USDA State Director of Rural Development, it became clear that this \$200,000-\$300,000 grant is locked up with ICDC. Phil expressed serious doubt that an IU center would be able to pull this funding away from ICDC. Furthermore, Indiana State University applied for the grant in last year's cycle and it was not awarded (Lehmkuhler, 2015). If the IU Rural Center for Excellence aspires to provide Cooperative Development Services, funding will need to originate from other than the USDA. Considering that this is the premier cooperative center grant in the US, IU's efforts may be better focused elsewhere.

### ***Focus Area 2: Rural STEM Programs***

#### **Concept**

As mentioned earlier in the "Workforce Development" section of this report, improving STEM education is critical to the future success of the region. However, in order to accomplish systemic change there must be an integration of programs, research and technology available within the

community, not from a distance. The IU Rural Center for Excellence could coordinate current IU efforts into a comprehensive effort to improve STEM education in the SWC rural region. Specifically, the RCOE could implement pilot STEM programs in the rural region to act as a test-bank for STEM initiatives across the state and nation.

### **External Review: National STEM Initiatives**

STEM education programs are also a trend nationally. As an example, the National Science Foundation is spearheading a program to help public schools embrace STEM curriculum starting at a very early age in Baltimore.

Thanks to a five-year, \$7.4 million grant from the National Science Foundation, the new program known as “STEM Achievement” provides training in STEM education for as many as 1,600 students in grades three through five through hands-on training provided by Johns Hopkins University. Faculty members from participating schools receive training and resources directly from the university to provide their students with a broad STEM education that will translate directly to real world experience (De Nike, 2012).

The current university activities in STEM have potential to expand to the SWC Indiana rural region through the IU Rural Center of Excellence. Using peer institutions as models for comparison, IU can use its institutional knowledge on STEM to secure external funding for outreach into this rural region. An overview of STEM at IU and Indiana STEM issues are included in the next section.

### **Internal Review: STEM at IU**

Indiana University has a stellar STEM reputation. In fact, IU ranks 11<sup>th</sup> in the nation for advancing women in STEM programs (Chaplin, 2013). A cursory search of IU STEM initiatives and programs reveals over ten pages of award winning programs, research grants, faculty awards, and new career opportunities. The Indiana Department of Workforce Development (DWD) projects that over the next decade, Indiana STEM jobs will grow by 21.2 percent, faster than other occupations. Ninety six percent of these jobs require training beyond high school (Indiana Business Research Center, 2014). IU has an incredible opportunity to expand its STEM

success to the public school system through a rural initiative to introduce elementary students to the wonders of STEM.

Several initiatives already ongoing at IU are prime candidates for replication as pilot programs in the eleven-county rural region. IU's Center for Research on Learning and Technology offers innovative curriculum advances in K-12 education to enhance and expand STEM curriculum in schools. IU professor Dr. Dionne Cross Francis was recently awarded the K-12 Promotion of Education award for educators with a demonstrated commitment to enhancing STEM career opportunities for women and minorities. Below are two examples of innovative programs at IU that could be replicated and piloted in rural areas.

First, the P-16 Shoring UP is Dr. Cross Francis's project designed to enhance teacher quality in science, technology, engineering, and mathematics (STEM) for secondary grades in Northwest Indiana. A partnership between the school districts creates a unique opportunity to establish a regional community of practice among teachers to sustainably support project-based learning (PBL) and capitalize on the shared community asset of the Lake Michigan watershed (IU School of Education, 2015).

The second example is from the IU School of Education. The Design and Implementation (DIP) project, led by Dr. Kylie Pepler and Dr. Joshua Danish at Indiana University, addresses the goal of bringing advances in technology together using what we know about how people learn to design and implement new tools that radically enhance student learning and interest in STEM fields. The project aims to support student learning within the STEM discipline of biology, to make complex-systems content, concepts, and skills accessible for early elementary (K-3) school students by combining intuitive, computationally enhanced participatory simulations with accessible computer simulations (IU Media Relations, 2013).

### **Stakeholder Analysis**

The idea of harnessing the new and creative learning techniques to engage students in STEM at an early age is at the top of the list many of the stakeholders interviewed. This capstone team was cautioned that the most effective way to engage students and teachers was through integration in the community and continued training as a way of measuring outcomes. The "boots on the ground" approach to change was articulated by several stakeholders who stated

that new programs and initiatives must come to the people of the region; the people will not go to the programs (Bartells, Houchin, Ferguson, and Skillman interviews)

Additionally, IU Southeast expressed an interest in expanding its reach and student recruitment in this region, specifically Crawford, Dubois, and Washington Counties. Dr. Ray Wallace, IUS Chancellor, briefly discussed the potential ability to collaborate with IU Bloomington in forging the sense of regionalism by leveraging the close proximity and strengths of IU's regional campus. Considering the success of the STEM collaborative initiative implemented in NW Indiana by Dr. Cross Francis, IU has an opportunity to partner with local organizations in SWC Indiana to achieve similar success.

### **Funding Analysis: STEM Grants**

#### *Science through Technology Enhanced Play (NSF) Award # 1323767*

Science through Technologically Enhanced Play (STEP) aims to transform the way we think about early elementary science education, moving away from a tradition that assumes children are developmentally incapable of engaging deeply with complicated science concepts, and towards a perspective that uses technologies to capitalize on young children's developmental strengths and capabilities. This program began in 2013 and will continue to give out funding until 2016 with over \$1 million already awarded (National Science Foundation, 2013). This grant has funded the project mentioned above by Joshua Danish and Kylie Pepler at IU.

Numerous examples of funded research projects similar to this are currently ongoing at IU and should be expanded into the eleven-county rural region. This team recommends visiting with each of these existing IU projects seeking to replicate them in a pilot program of several SWC Indiana counties school systems. Before applying for new funding, IU should first take stock of its current STEM research and education activities to find the best candidates for the SWC rural area.

### ***Focus Area 3: Rural Health & Substance Abuse***

#### **Concept**

The RCOE could connect medical resources and knowledge to the communities with the application of technology. This would include providing educational programs or training

sessions that lead to certificate online and on campus programs for the communities. Additionally, faculty will conduct health policy analysis and research on a wide range of public health topics with the involvement of many areas of Indiana University. The RCOE should assist the communities in understanding the impact of current and proposed policies, and distribute healthcare facility support through collaboration with healthcare organizations, specifically IU Health.

### **External Review: University Research Models**

The Center for Rural Health at the University of North Dakota (CRH) creates several methods to provide education opportunities, including regular presentations presented by its staff, email updates, online accessible websites with information on rural health and human services topics, educational programs and other workshops (University of North Dakota, 2015). Rural South Public Health Training Center at the University of Florida provides online and on campus educational programs, including graduate programs. Some of its programs are free of charge to enable individuals to afford the education (University of Florida, 2015).

The CRH, the Iowa State University's Center for Agricultural and Rural Development (CARD), the Rural Health Research Center at the University of Minnesota (RHRC), and the Walsh Center for Rural Health at the University of Chicago all serve as research centers. They provide periodical updated reports on health policy and other public health issues, which can be attained by the public through their websites (University of North Dakota, 2015) (Iowa State University, 2014) (University of Minnesota, 2010) (University of Chicago, 2015).

The CRH provides consulting services to the communities, improving the awareness and understanding of the current proposed health policies (University of North Dakota, 2015). Both the CRH and the RHRC distribute financial and technology assistance to local health organizations to improve the quality of healthcare services, and enhance the accessibilities of healthcare services in the communities (University of North Dakota, 2015; University of Minnesota, 2015).

These peer institutions show a wide variety of activities ranging from academic research to consulting services. The IU School of Public Health is positioned to spearhead similar efforts for IU in the eleven-county rural region.

## **Internal Review: Rural Health Initiatives at IU**

As mentioned before, the IU Rural Center of Excellence should serve as a place for interdisciplinary approaches to solving rural issues. Specifically within health issues, several IU entities currently on campus provide a strong base to address rural issues in the region of focus. First, the IU School of Public Health's Center for Research on Health Disparities focuses on questions surrounding regional health indicator disparities in the state (McCloskey, 2015). Researchers involved in this center would show interest in examining SWC Indiana given its relatively low health indicators. Next, the Indiana Prevention Resource Center and the Institute for Research on Addictive Behavior both analyze the psychology and treatment of those afflicted by addiction (Indiana Prevention Resource Center, 2015) (Institute for Research on Addictive Behavior, 2015). The powerful research being conducted at these IU centers paired with the funding opportunities listed later in this section create a strong response to health issues within the eleven-county rural region.

## **Stakeholder Analysis**

The recent outbreak of HIV due to drug use has the entire Indiana community concerned. This is a public health issue, not simply a drug issue. Congressman Todd Young and Senator Erin Houchin both expressed intense desire for the rural center of excellence to address public health, behavioral health, substance abuse and access to immediate critical care. The ability to address public health disparities begins with education. According to America's Health Rankings Indiana ranks 41 in overall health and IU is dedicated to changing these statistics (United Health Foundation, 2014).

President McRobbie's 2014 address discussed the *New Academic Directions* of several schools and centers including the School of Public Health's Rural Health Innovation Collaborative emphasizing rural areas and other health disparities (Indiana University Media Relations, 2014). Numerous faculty members from the Applied Health Sciences, Environmental Health, Epidemiology, and Biostatistics departments will be interested in both educational and research initiatives available through the grant funding opportunities outlined in our recommendations.



## **Funding Analysis: Rural Health Research Grants**

### *Behavioral and Social Science Research on Understanding and Reducing Health Disparities (R01)<sup>26</sup> CFDA # 93\**

The purpose of this research grant is to encourage behavioral and social science research on the causes and solutions to health and disabilities disparities in the U. S. population. Health disparities between racial/ethnic populations, lower socioeconomic classes, and rural residents as well as the overall U.S. population are major public health concerns. Emphasis is placed on research in and among three broad areas of action: 1) public policy, 2) health care, and 3) disease/disability prevention. Particular attention is given to reducing “health gaps” among groups. Applications that utilize an interdisciplinary approach, investigate multiple levels of analysis, incorporate a life-course perspective, and/or employ innovative methods such as systems science or community-based participatory research are particularly encouraged. (National Institutes of Health, 2013)

This team recommends that scholars and researchers from the IUB School of Public Health and School of Public and Environmental Affairs examine the feasibility of applying for this research grant and incorporate rural health research components into the grant proposals. We advise the Rural Center of Excellence to contact with the School of Public Health - Center for Research on Health Disparities for possible research collaborations.

### *Innovative Measurement Tools for Community Engaged Research Efforts (R01) CFDA # 93.361*

This research grant seeks to develop innovative measurement for community engaged research efforts. The use of community engaged research (CEnR) methodologies, such as community-based participatory, community-based, and practice-based research is regarded as valid approaches to prevent disease and promote health. (National Institute of Health, 2013)

This capstone project recommends that the Center contact scholars and researchers at the School of Public Health about CEnR and its application in conducting rural health research. Further grant and research discussions are needed prior to grant application.

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<sup>26</sup> R01: Research Project Grant

## **Funding Analysis: Rural Health Project Grants**

*Academic-Community Partnership Conference Series (R13)<sup>27</sup> CFDA # 93.865*

This funding opportunity announcement encourages Research Conference Grant (R13) applications to conduct health disparities-related meetings, workshops, and symposia. The purpose of the Academic-Community Partnership Conference Series is to bring together academic institutions and community organizations to identify opportunities for reducing health disparities through the use of Community-Based Participatory Research (CBPR). The objectives of meetings conducted as part of this award will be to: (1) establish and/or enhance existing academic-community partnerships; (2) identify community-driven research priorities; and (3) develop long-term collaborative CBPR research agendas. Thus, it is expected these partnerships will lead to grant applications for the support of CBPR projects designed to meet identified community needs. The areas of focus for these partnerships may include one or more of the following community-health issues: preterm birth; infant mortality; sudden infant death syndrome (SIDS); maternal mortality; reproductive health; uterine fibroid tumors; childhood, adolescent, and/or adult obesity; violence prevention; perinatal HBV and HIV/AIDS prevention; HIV/AIDS prevention; asthma; intellectual and developmental disabilities; pediatric injury prevention; and medical rehabilitation. (National Institutes of Health, 2014)

Specific examples of collaborative meetings include, but are not limited to, the following: (National Institutes of Health, 2014)

- Workshops to identify issues and research objectives that are important to the community;
- Meetings to strengthen and enhance the collaborative/multidisciplinary research efforts between grantee institutions/organizations and communities of interest;
- Workshops among researchers, and community leaders to identify the health and resource needs of the community;
- Seminars led by community partners and academic researchers highlighting research findings on the prevalence and incidence of relevant health disparities in the community.

This team recommends that the Center consider community health conferencing opportunities that will bring in researchers, local partners, and stakeholders from the rural communities.

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<sup>27</sup> R13: Support for Conferences and Scientific Meetings

## **Funding Analysis: Substance Abuse Project Grants**

### *SAMHSA SBIRT Health Professions Student Training*

The Substance Abuse and Mental Health Services Administration provides a number of recurring and non-recurring grants that would apply to the center's mission. Of these, the most obvious fit for the center is what SAMHSA calls the "SBIRT Health Professions Student Training Program". The program's stated mission is

to develop and implement training programs to teach students in health professions (physician assistants, dentists, pharmacists, nurses, social workers, counselors, and medical students and residents) the skills necessary to provide evidence-based screening and brief intervention and refer patients who are at risk for a substance use disorder (SUD) to appropriate treatment (SBIRT Health Professions Student Training, 2015)

Numerous stakeholders within the SWC Indiana rural region have expressed a frustration at a perceived widespread pattern of drug abuse. Not only is this public health phenomenon harmful in and of itself, but substance abuse impacts job creation and retention measures, as well. The SBIRT program would award around \$315,000 annually for up to 3 years (SBIRT Health Professions Student Training, 2015). We recommend that IU collaborate with the School of Public Health whereby this grant money could be used to specifically train healthcare students for care in rural settings.

### *"Now is the Time" Project AWARE-Community Grants*

In 2013, SAMHSA established the "Now is the Time" project, aimed at ensuring that youth and adolescents receive adequate mental health care. As a part of this initiative, the agency provides grants to various non-profit organizations, including public universities, in order to

support the training of teachers and a broad array of actors who interact with youth through their programs at the community level, including parents, law enforcement, faith-based leaders, and other adults, in Mental Health First Aid (MHFA) or Youth Mental Health First Aid (YMHFA). (Now is the Time Project AWARE - Community Grants, 2015)

This team recommends that the Center consider establishing a collaborative program with the School of Education and / or the School of Public Health, as well as the community mental health organizations currently providing behavioral health and substance abuse programs

including MHFA in the rural region. By collaborating with a community mental health center that is positioned to step in and provide services to this community, this grant provides an exceptional opportunity to measure early outcomes. Identified community members from rural counties could then come to the Center to receive this training with a broader understanding of the need. Funding is in the amount of \$125,000 per year for up to three years (Now is the Time Project AWARE - Community Grants, 2015)

## ***Focus Area 4: Rural Technology and Broadband***

### **Concept**

The lack of technology available to provide instruction, technical assistance, innovation and communication is a major barrier to success in rural SWC Indiana. Any efforts by IU to improve the SWC Indiana rural region may prove futile without first addressing connectivity issues.

Fewer than twenty percent of Indiana's High Schools teach computer science. According to Federal Communication Commission Chairman Julius Genachowski, approximately one in three Americans, mostly minority or low income, still do not have broadband Internet access at home. Because so many employers post job openings exclusively online and because most jobs today require some type of computer use, digital literacy skills and access to high-speed Internet are crucial for completing education, finding and keeping a job, and interacting with government (Littlepage, Kramer, & Patten, 2014, p. 17).

By the year 2020 there will be one million more computing jobs than computer science students. In Central Indiana the number of technical jobs is projected to grow by 27 percent as compared to 15 percent for other occupations. Also by 2020 there will be a 22% job growth rate in computing jobs, as compared to healthcare job growth rates. There is a 51% projected growth in STEM jobs compared to social, physical, life and engineering STEM occupations (McGowan, 2015). Obviously there is a critical need for technology education and a critical need for connectivity in SWC IN. The opportunities for measureable successful outcomes by investing in the broadband infrastructure are boundless. IU could show the real impact of investing in rural connectivity improvements by analyzing the productivity of the region's future workforce.

## **External Review: Rural Broadband Projects in Indiana**

In 2012, broadband provider Q-wireless LLC partnered with the Harrison County Chamber of Commerce, and the Harrison County Economic Development Corporation to apply for the Community Connect USDA grant to construct the “Mauckport High Speed Internet Center”. The center has 10 state-of-the-art computer workstations connected to high speed internet open to the public 6 days a week (Harrison County Indiana Community Portal, 2015). The total project cost was \$782,000 while each group shared in matching funds of \$147,920 (Harrison County Indiana Community Portal, 2015).

The grant provided funding to construct the center as well as two free years of service fees, however, all parties shared in matching funds for the project (USDA, 2015). One challenge with this grant is the continual service charge for internet connection after the expiration of the two year grace period. In the “Funding Analysis” section below, this specific grant opportunity is mentioned as a strong candidate for the IU Rural Center of Excellence.

## **Internal Review: Technology Outreach at IU**

Many opportunities listed in this report show potential ways for IU faculty to be involved in the services and research of the RCOE. Some student-led initiatives at IU may also be expanded to the rural region through the RCOE. For example, the Serve IT Clinic at IU’s School of Informatics and Computing provides consulting services to nonprofit organizations that lack IT resources. The clinic uses teams of Informatics students to assist organizations in developing IT plans to improve their respective organizations and then implementing them. These students have worked with a variety of nonprofits in the Bloomington area including Council of Neighborhood Associations, Sycamore Land Trust, and others (IU School of Informatics and Computing, 2015). By expanding their services to the eleven-county rural region, Serve IT could serve a greater client base while creating more in depth, real-world projects for IU students.

## **Stakeholder Analysis**

Over the course of the project period, this team has conducted numerous interviews to make informed decisions on the direction of the Rural Center of Excellence. Many stakeholders mentioned the need for improved internet connectivity in the eleven-county rural region. These

comments strongly echoed recommendations in the Battelle report to “examine the internet and cellular connectivity in the region...” (Battelle Memorial Institute, 2014, pp. ES-6).

The capstone team mentioned rural broadband expansion from the IU Rural Center of Excellence to President and CEO of Smithville Communications, Darby McCarty. Smithville is Indiana’s largest independent broadband provider and is located in Bloomington, IN (Smithville Communications, 2015). Although the conversation was brief, Ms. McCarty was enthusiastic about the potential for expansion with local, state, and federal support. Smithville is already connected to IU through large sponsorships of IU programs and athletic events and should be considered a strategic partner for any broadband expansion in the area (Smithville Communications, 2015).

### **Funding Analysis: Rural Broadband Connection Grants**

#### *Community Connect Grant Program (USDA) CFDA# 10.863*

The Community Connect Grant Program of the USDA provides funding for the construction of “Community Connect Centers” housing high-speed internet computers for public use in rural communities (USDA, 2015). This grant addresses an issue this team heard repeatedly throughout our stakeholder analysis: these rural communities in question lack adequate broadband connection services. The recent example in Harrison County Indiana cited above shows the potential impact of the grant. As only one grant has been awarded to Indiana in the past three years, IU should put strong consideration towards this applying for grant.

Earlier, the Mauckport High Speed Internet Center was highlighted. An opportunity exists for the IU Rural Center of Excellence, Radius Indiana, Smithville, and a local community to similarly apply for a grant to construct another center in the eleven-county rural region. The main hurdle to accomplishing broadband connection in this area will be continued service charges and availability of matching funds. Several of the local community foundations in the SWC Indiana counties have roots springing from the Lilly Foundation. This team recommends that these community foundations are considered to contribute matching funds for a broadband initiative.

## ***Other Opportunities***

### **Rural Energy**

By leveraging the School of Public and Environmental Affairs' outstanding environmental policy, energy, and sustainability programs, the Rural Center of Excellence is positioned to provide expertise on these issues to the rural community. Through the grant listed below, SPEA students and faculty could work together to provide consulting services to rural community members much like the Serve IT clinic listed above in the previous Focus Area section.

*Rural Energy for America Program (REAP) Energy Audit & Renewable Energy Development Assistance Grants (USDA) CFDA # 10.868*

The IU Rural Center of Excellence must utilize university strengths to address the needs of the community to be a successful IU entity. Specifically, SPEA's expertise in areas such as energy and environmental issues should be maximized to improve the business and agricultural efforts of our rural communities. The Rural Energy for America Program (REAP) Energy Audit grant allows IU to apply that specific expertise. The goal of the REAP energy audit grant is to allow governments and universities the funding to conduct energy audits for local community members to determine their eligibility for USDA renewable energy systems grants and make recommendations to improve efficiency (Freeman, 2015). Maximum grant awards are \$100,000 (Freeman, 2015).

This grant provides the unique opportunity for both faculty and students to use their classroom knowledge to directly impact their community. Additionally, faculty would find many opportunities for research as they dig deeper into these rural communities. Even if the IU Center is unable to secure these funds to conduct audits, SPEA should strongly consider housing the Rural Center and approaching rural issues from the environmental angle. Many farmers and rural business owners are likely unaware of the variety of grant opportunities from the USDA and their subsidiary programs for installation of renewable energy systems. SPEA could lead the charge in making this rural region a national leader on rural renewable and sustainable energy systems for Indiana farms and businesses.

## **University Funding**

Indiana University needs to show external stakeholders that this center is a priority and that it will be financially supported by the university for years to come. Specifically, most grant funds will require a match of some sort from the university. In order to further demonstrate university buy-in, IU should consider an IU Foundation grant to the center. Additional IU funding of this sort for a new initiative like the RCOE, could show outside parties that IU is serious about this initiative and could hopefully lead to additional outside funding.

### *Indiana University Foundation-Women's Philanthropy Council Grant*

The Indiana University Foundation's Women's Philanthropy Council (WPC) is a group headed by IU First Lady Laurie Burns McRobbie that provides approximately \$100,000 in grant funding each year to IU-centric proposals with awards ranging from \$2,500 to \$25,000 each (Indiana University Foundation, 2015). The WPC specifically states that projects that "propose to give back" and "provide unique opportunities to the university community are especially welcome" (Indiana University Foundation, 2015). In 2014, WPC awarded a grant to the IU Dental Student Outreach clinic that focuses on care for disadvantaged community members in Indianapolis. Additionally, a grant was awarded to the Summer Leadership Academy for Undergraduate Students from Underrepresented Backgrounds, an initiative of the IUPUI McKinney School of Law (Indiana University Foundation, 2015). The WPC places emphasis on IU outreach initiatives that benefit community members that are often overlooked. Considering the mission of the Rural Center of Excellence, there is a high probability of WPC grant funding for the center.

## **Advisory Board and the General Assembly**

Throughout this report this capstone team provided several recommendations regarding federal funding sources based on peer institution rural center models, stakeholder suggestions, Battelle recommendations, and an inventory of IU initiatives and priorities. Through interviews with Indiana state representatives, this team learned of the potential for an Indiana General Assembly appropriation to create the IU Rural Center of Excellence. If the elected officials in the SWC Indiana region support his initiative, and they engaged their constituents in conversations about the positive impact on the region, a proposal could be brought before the state legislature. The idea of "what's good for my community could be good for yours" is exciting, intriguing, and interesting (Houchin, Arnold, Skillman interviews). Although lobbying state officials to support



funding the IU RCOE is beyond the scope of this capstone team's project or expertise, the potential is encouraging. If advanced correctly, state government support could fill in the center's funding gaps where federal grant support may fall short.

## ***Challenges***

Throughout the report, this capstone team mentioned a number of challenges for creating an IU Rural Center of Excellence. These challenges may be summarized best by the following three concepts.

- 1) **Indiana University's structure:** Unfortunately, the potential for federal government funding for the Rural Center of Excellence is greatly hindered by IU's lack of "land-grant" university status. Purdue University serves as Indiana's land-grant institution and thus inherently promote serving the rural regions of the state in addition to their research focus. Many federal grant programs are earmarked for land-grant universities, making IU ineligible. However, through the creative mix of funding sources outlined in this report, IU is still well-positioned to succeed in creating the center. To be sustainable moving forward, IU must continue to be innovative in its funding approach for the center.
  
- 2) **Research vs. Practice:** Many IU centers mentioned in this report focus the majority of their activities on in-depth research of their respective subject matter. The IU Rural Center of Excellence's focus on actively working to improve the SWC Indiana rural region is a shift in the focus of centers at IU. This team anticipates substantial pushback from IU leadership and faculty on the idea of a land-grant university type center. To address this issue, the Rural Center of Excellence must be vigilant in promoting the benefits of marrying research with "boots on the ground" initiatives.
  
- 3) **Outside Competition:** With the establishment of Indiana State's Rural-Urban Entrepreneurship Institute in 2012 and the success of Purdue's Center for Regional Development, the pressure is on IU to quickly develop the Rural Center of Excellence. IU may lose the chance to establish a presence in the eleven-county rural region while other Hoosier universities began to build their reputations as invested in the success of the state. As mentioned earlier, IU will always be a globally renowned university, but potential exists to also become a champion of Hoosier success. Indiana University should be encouraged by the potential in the SWC Indiana rural region but also pushed by its peer institutions to address the issues in its own backyard.

## ***Conclusion***

The eleven-county region profiled in this report faces a number of serious challenges. Within those challenges include poor health indicators, lack of rural internet connectivity, an under-supported business development community, and a lack of effective education systems. Vigorous efforts must be made on the part of a broad coalition of community members and like-minded organizations to address and solve these issues. Indiana University has a large role to play in this coalition. The Rural Center of Excellence serves as the best option for IU to advance SWC Indiana and build a legacy as a champion of the rural community.

While the exact structure of the center is yet to be determined, this report recommends the four focus areas most likely for success: rural business, STEM education, rural health, and rural connectivity. The areas of need in the region are vast, but there are also considerable outside resources ready to be leveraged towards solutions. By focusing on these four areas, the Rural Center of Excellence would be able to marry Indiana University's strong research environment with federally funded outreach activities. The result could be a nationally renowned model of success for other universities to replicate. By creating partnerships with the local rural community and using institutional knowledge to address rural issues through the Rural Center of Excellence, Indiana University has the potential to revolutionize the SWC Indiana region into a model for success in the state and beyond.

## ***Appendix I: Stakeholder meetings***

Our team met with the following community stakeholders whose opinions and insights are contained in this report:

Arnold, Lloyd; Indiana State Representative, February 2015 (G. Cooper Interviewer)

Bartells, Steve; Crawford County Council President, March 2015 (G. Cooper Interviewer)

Breeding, Bill; Crawford County Commissioner, March 2015 (G. Cooper Interviewer)

Crawford County Farm Bureau Board of Directors, February 2015 (G. Cooper Interviewer)

Ferguson, Stephen; Chairman of the Board, Cook Medical Group, March 2013 (G. Cooper Interviewer)

Fleener, Darrin; Chicago Region Economic Development Administration, March 2015 (A. Olson Interviewer)

Hardisty Jane; NRCS Indiana State Conservationist, February 2015 (G. Cooper Interviewer)

Houchin, Erin; Indiana State Senator, March 2015 (G. Cooper Interviewer)

Kaiser, Jim; Associate Professor Emeritus, University of Illinois, February 2015 (G. Cooper Interviewer)

Lehmkuhler, Phil; USDA Indiana State Director, April 2015. (A. Olson, Interviewer)

McCarty, Darby; Smithville Communications CEO, March 2015. (G. Cooper, Interviewer)

Milltown Indiana Town Council; February 2015 (G. Cooper Interviewer)

Skillman, Becky; Radius Indiana CEO, March 2015 (G. Cooper, A. Olson, J. Xu Interviewers)

Stingel, Keeley; OCRA Regional Representative, March 2015 (G. Cooper, A. Olson, B. Ling Interviewers)

Timbrook, Joe; Radius Indiana Manager, March 2015 (G. Cooper, A. Olson, J. Xu Interviewers)

Wallace, Ray, PhD.; Indiana University Southeast Chancellor, March 2015 (J.Carley, G. Cooper, K. White Interviewers)

Young, Todd; US Congressman, February 2015 (G. Cooper & R. Kasey Interviewers)

## ***Appendix II: Relevant Faculty Members***

### Relevant Faculty Members for Rural Business

#### **Kelley School of Business**

Jeffrey G. Covin

- Professor
- Strategic Management, Entrepreneurship

Donald F. Kuratko (Dr. K)

- Professor
- Entrepreneurship, Corporate Entrepreneurship, Corporate Innovation, Entrepreneurial Leadership

Dean A. Shepherd

- Professor
- Entrepreneurial Opportunity, Stakeholder Support for Entrepreneurial Firms, Entrepreneurial Strategies, Failure of Entrepreneurial Businesses

Siri A Terjesen

- Assistant Professor
- Failure of Entrepreneurial Businesses
- Strategic Entrepreneurship, International Management, Gender in Management (corporate boards, entrepreneurship)

#### **School of Environment and Public Affairs**

Barry M. Rubin

- Professor
- Urban economic development, Energy policies

Rafael Reuveny

- Professor
- Sustainable Development

Kenneth R. Richards

- Professor
- Environmental economics and policies

Franklin Acito

- Professor

- Strategies for analyzing structural models, alignment of marketing and sales strategies, sampling characteristics and the use of marketing research by managers

### Relevant Faculty Members for Cooperative Development

#### **Kelley School of Business**

Herman Aguinis

- Chairperson, Management and Entrepreneurship, Eveleigh Professor of Business Leadership, Faculty Liaison, Executive Degree Programs
- Organizational Behavior; Human Resource Management; Research Methods and Analysis; and Human Capital Acquisition, Development, and Deployment (e.g., Corporate Responsibility, Domestic and International Diversity, Staffing, Training and Development, Performance Management)

Timothy Baldwin

- Chairperson
- Organizational Change, Leadership Education and Development, Managerial Skill Assessment

#### **School of Environment and Public Affairs**

Barry M. Rubin

- Professor
- Urban economic development, Energy policies

School of Education

Patricia Kubow

- Professor and Director, Center for International Education, development, and research
- Education Leadership and Policy Studies, Curriculum Studies, Curriculum and Instruction

Robert Kunzman

- Professor and Associate Dean for Teacher Education
- Curriculum and Instruction, Curriculum Studies, office of Teacher Education, Education Leadership and policy studies.

### Relevant Faculty Members for STEM

#### **School of Education**

Valarie Akerson

- Professor of Science Education
- Curriculum and Instruction, Elementary Education, Elementary Certification Mater's program, Science education

Catherine Brown

- Professor of Mathematics Education
- Curriculum and Instruction, Center for P-16 Research and Collaboration

Robert Sherwood

- Professor of Science Education
- Center for P-16 Research and Collaboration, learning sciences, science education, curriculum and instruction

Peter Kloosterman

- Professor of Mathematics Education, Chari for Teacher Education
- Curriculum and Instruction, Elementary Education, Mathematics, Education, Armstrong Teacher Educator Award.

Robert Kunzman

- Professor and Associate Dean for Teacher Education
- Curriculum and Instruction, Curriculum Studies, office of Teacher Education, Education Leadership and policy studies.

Terrence Mason

- Professor of Curriculum Studies and Associate Dean for Research and Development
- Curriculum and Instruction, Curriculum Studies, and Elementary Education

## **School of Informatics and Computing**

Bernard Frischer

- Professor of Informatics
- Archaeoinformatics, Virtual Heritage, Virtual World in teaching research

Douglas Hofstandter

- Professor of College of arts and sciences, and Cognitive Science and Computer Science
- Creativity in art and music, discovery in mathematics and physics

## Relevant Faculty Members for Rural Health

### **School of Public Health**

Ruth Gassman

- Executive Director , IPRC

- Alcohol Abuse, Drug abuse, Health Services

Robert M. Goodman

- Professor and Former Dean
- Behavioral Science, Health promotion advocacy

Michael Hendryx

- Professor
- Health disparities, Appalachia, coal mining, environmental

Noy S. Kay

- Clinical Professor
- Health promotion, lifestyles education, international health study, death education

David K. Lohrmann

- Professor and Chair, Applied Health Science
- School health promotion, health education, alcohol, tobacco, drug abuse prevention, sexuality education , HIV/STD prevention

Michael Reece

- Professor and Associate Dean
- Sexual health promotion, HIV-related mental health care

Catherine Sherwood-laughlin

- Clinical Professor
- Sexual health education, cancer prevention, cancer education, program planning

Dong-chul Seo

- Professor
- Obesity, tobacco, alcohol, measurement, evaluation

## **School of Public and Environmental Affairs**

Kosali Simon

- Professor
- Health Policy, Health Economics

School of Kelley

Anthony D. Cox

- Professor
- How consumers evaluate the risks of using (and not using) medical products, How message framing influences health-related behaviors, How measuring consumers' intentions and attitudes influences their subsequent behavior

Dena S. Cox

- Professor
- Consumer buying behavior, Interventions to increase healthy behavior, Marketing of medical products and services, Marketing research

Vicki Daniels

- Professor
- Health care operations management, Health care supply chain management, Project management, Service operations, Value optimization and performance measurement

Arlen W. Langvardt

- Professor
- Intellectual Property, First Amendment, Ethics and Critical Thinking, Health Care Law and Policy



## ***Appendix III: Grants List***

The following list shows a more in-depth look at the grant opportunities listed in this report including matching requirements, grant cycles, index numbers and other information.

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### **Grant Name: National Technical Assistance Project-University Centers**

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**Agency:** Economic Development Administration

**Index Number:** CFDA # 11.303

**Category:** Rural Business

**Overview:** These programs provide grants or cooperative agreements to invest in institutions of higher education to establish and operate University Centers to support initiatives that are focused on advancing: regional commercialization efforts; entrepreneurship; and a high-skilled regional workforce. **Reason for Selection:** This grant has provided funding to the Purdue Center for Regional Development for the past four years. A new funding competition will start in FY16. Each state is allowed one university center.

**Matching Requirements:** The amount of the EDA award may not exceed 50 percent of the total cost of the project. Projects may receive an additional amount that shall not exceed 30 percent, based on the relative needs of the region in which the project will be located, as determined by EDA

**Award Amount:** Ranges between \$80,000-\$200,000

**Cycle/Dates:** Five year project funding starts in FY16

**Special Restrictions:** operate on five year project funding periods; only one grant is awarded per state

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### **Grant Name: Federal and State Technology Partnership Program**

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**Agency:** Small Business Administration

**Index Number:** CFDA # 59.058

**Category:** Rural Business

**Overview:** The purpose of the FAST program is to strengthen the technological competitiveness of small business concerns in the U.S. Universities can use this grant to provide consulting services to community members, business owners, and farmers to assist in applying for federal grants from agencies such as USDA, Department of Commerce, Department of Defense, Department of Education, Department of Energy, HHS, Department of Homeland Security, Department of Transportation, EPA, NASA, and NSF.

**Reason for Selection:** Allows for direct outreach into rural communities building the relationship between the University and community members. Improves rural community's participation in federal grant programs.

**Matching Requirements:**

**Award Amount:** \$100,000 per applicant

**Cycle/Dates:** Annual; last awards were given in June 2014

**Special Restrictions:** All applications must be approved by the governor's office as each state is allowed one applicant per year

**Grant Name: Research and Evaluation Program**

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**Agency:** Economic Development Administration

**Index Number:** CFDA # 11.312

**Category:** Rural Business

**Overview:** The Research and Evaluation Program of the Economic Development Administration (EDA) supports rigorous, practitioner accessible research of leading, world class economic development practice that advances our understanding of economic development. Current funding priorities include proposals that enhance regional competitiveness by focusing on entrepreneurship and innovation strategies

**Reason for Selection:** Allows for university faculty and students to apply their research to SWC Indiana's rural communities

**Matching Requirements:** 50 %. All matching shares must be allowable based on cost principles applicable to award

**Award Amount:** typically between \$100,000-\$400,000

**Cycle/Dates:** Annual\*; unclear if funding will be available in the next few years

**Special Restrictions:** Grant does not appear to be active for the next few years

**Grant Name: Community Connect Grant Program**

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**Agency:** United States Department of Agriculture

**Index Number:** CFDA # 10.863

**Category:** Rural Connectivity

**Overview:** To encourage community-oriented connectivity by providing grants to eligible applicants who will deploy broadband transmission service in rural communities where such service does not currently exist; who will connect all critical community facilities such as local schools, education centers, libraries, hospitals, health care providers, law enforcement agencies, public safety organizations, fire, and rescue services, as well as residents and businesses; and who will operate a community center which provides free and open access to area residents for two years.

**Reason for Selection:** Many stakeholders have expressed that rural broadband connectivity is a big issue in these areas

**Matching Requirements:** 15%. The grant applicant must contribute a matching contribution in the form of cash which is at least 15 percent of the grant amount requested and must be in cash.

**Award Amount:** Total grant pool is \$14 million; a 2012 project in Mauckport, Indiana received nearly \$150,000 from USDA with matches from other sources

**Cycle/Dates:** Annual; last grant cycle closed February, 2015

**Special Restrictions:** Rural areas that lack any existing broadband speed of at least 3 Mbps (download plus upload) is eligible; applicant must pay for utility fees after two year grace period

**Grant Name: Rural Cooperative Development Grant**

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**Agency:** United States Department of Agriculture

**Index Number:** CFDA # 10.771

**Category:** Rural Cooperatives

**Overview:** The primary objective of the RCDG program is to improve the economic condition of rural areas by assisting individuals or entities in the startup, expansion or operational improvement of rural businesses, especially cooperative or mutually-owned businesses. The

grant program will be used to facilitate the creation or retention of jobs in rural areas through the development of new rural cooperatives, value-added processing, and rural businesses.

**Reason for Selection:** Allows for outreach into communities to improve business outcomes for rural community members

**Matching Requirements:** 25%. The matching funds requirement is 25 percent of the total project cost

**Award Amount:** \$200,000-\$300,000

**Cycle/Dates:** Annual

**Special Restrictions:** This grant goes annually to the Indiana Cooperative Development Center at Indianapolis. The USDA sees very little possibility of this grant going to a new applicant. Indiana State University applied and did not win the grant in 2014.

**Grant Name: Rural Energy for America Program (REAP) Energy Audit & Renewable Energy Development Assistance Grants**

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**Agency:** United States Department of Agriculture

**Index Number:** CFDA # 10.868

**Category:** Rural Energy

**Overview:** Grantees assist rural small businesses and agricultural producers by conducting and promoting energy audits, and providing renewable energy development assistance (REDA)

**Reason for Selection:** SPEA's expertise in energy and sustainability provides IU as a perfect candidate to provide energy audits for rural community members

**Matching Requirements:** The recipient of the energy audit must pay at least 25% of the cost of the audit

**Award Amount:** maximum aggregate amount of \$100,000 in a fiscal year, average \$85,000

**Cycle/Dates:** Projects should be completed within two years of the award; funds can be released monthly

**Special Restrictions:** Eligible costs include administrative expenses, up to a maximum of 5% of the grant, which include but are not limited to utilities, office space, operation expenses of office and other project-related equipment; small businesses must be in eligible rural areas

**Grant Name: Women's Philanthropy Council Grant**

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**Agency:** Indiana University Foundation

**Index Number:** N/A

**Category:** N/A

**Overview:** The council hopes to award grants that will advance its belief that all members of the Indiana University community should have access to quality educational opportunities, excellent health care, a clean and safe environment, cultural enrichment through the arts, and educational programs and services that allow them to pursue their academic careers. Applications that propose to give back and provide unique opportunities to the university community are especially welcome.

**Reason for Selection:** Shows buy-in from the University and affiliate groups for the project

**Matching Requirements:**

**Award Amount:** range from \$2,500-\$25,000

**Cycle/Dates:** annual, last grants awarded in June 2014

**Special Restrictions:** Eligible groups include any member of the Indiana University community on any campus. This includes students, faculty, staff, departments, programs, organizations, clubs, etc.

**Grant Name: Science through Technologically Enhanced Play (STEP)**

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**Agency:** National Science Foundation

**Index Number:** 1323767

**Category:** STEM

**Overview:** In this Cyberlearning: Transforming Education DIP (Development and Implementation) project, the PIs are investigating how embodied play among elementary school students can be used to help them understand scientific phenomena (e.g., the working of forces, complex behaviors of bees). They are instrumenting elementary school classrooms with advanced tracking. The PIs are building upon the ways that young children engage in socio-dramatic play.

**Reason for Selection:** IU is a grant recipient for this program, potential to replicate

**Matching Requirements:**

**Award Amount:** \$1,000,000

**Cycle/Dates:** September 15, 2013, August 31, 2016

**Grant Name: Behavioral and Social Science Research on Understanding and Reducing Health Disparities (R01)**

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**Agency:** National Institutes of Health (NIH)

**Index Number:** CFDA # 93.866; 93.173, 93.273; 93.121; 93.399; 93.396; 93.395; 93.394; 93.393; 93.865; 93.847; 93.242; 93.213; 93.867; 93.879; 93.113; 93.837; 93.279; 93.361; 93.846

**Category:** Rural Health (Research)

**Overview:** The purpose of this FOA is to encourage behavioral and social science research on the causes and solutions to health and disabilities disparities in the U. S. population. Health disparities between, on the one hand, racial/ethnic populations, lower socioeconomic classes, and rural residents and, on the other hand, the overall U.S. population are major public health concerns. Emphasis is placed on research in and among three broad areas of action: 1) public policy, 2) health care, and 3) disease/disability prevention. Particular attention is given to reducing “health gaps” among groups. Applications that utilize an interdisciplinary approach, investigate multiple levels of analysis, incorporate a life-course perspective, and/or employ innovative methods such as systems science or community-based participatory research are particularly encouraged.

**Reason for Selection:** This grant opportunity strongly encourages health researchers to investigate population health issues related to rural communities. (Detailed link: <http://grants.nih.gov/grants/guide/pa-files/PA-13-292.html>)

**Matching Requirements:**

**Award Amount:** Application budgets are not limited but need to reflect the actual needs of the proposed project.

**Cycle/Dates:** The total project period may not exceed 5 years. (Expiration Date: September 8, 2016)

**Special Restrictions:** New; Renewal; Resubmission; Revision grant application

**Grant Name: Innovative Measurement Tools for Community Engaged Research Efforts (R01)**

---

**Agency:** National Institutes of Health (NIH)

**Index Number:** CFDA # 93.361

**Category:** Rural Health (Research)

**Overview:** This funding opportunity announcement issued by the National Institute of Nursing Research (NINR) seeks to develop innovative measurement tools for community engaged research (CEnR) efforts.

Specific areas of research interest include, but are not limited to those listed below.

- Develop and test tools that measure trust between partners in engagement efforts
- Develop and test tools that measure capacity/readiness for research efforts
- Develop and test tools to measure successful partnership/collaboration in engagement efforts
- Develop reliable and valid tools that can be used in measuring community engaged research efforts that impact individual outcomes such as trust, capacity, empowerment, and collaboration
- Use established statistical procedures to test existing or newly developed instruments
- Develop and test instruments that measure the success or failure of partnership efforts
- Apply existing tools in measuring community engaged research efforts
- Develop and test scientific measures of sustainability for health improvement programs
- Develop and test scientific outcome measures related to improving health disparities

**Reason for Selection:** This grant opportunity encourages development of CEnR methodologies that potentially involve rural communities.

**Matching Requirements:**

**Award Amount:** Application budgets are not limited, but need to reflect the actual needs of the proposed project.

**Cycle/Dates:** The scope of the proposed project should determine the project period. The maximum period for the R01 mechanism is 5 years. (Expiration Date: September 8, 2016)

**Special Restrictions:** New; Renewal; Resubmission grant application

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**Grant Name: Academic-Community Partnership Conference Series (R13)**

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**Agency:** National Institutes of Health (NIH)

**Index Number:** CFDA # 93.865

**Category:** Rural Health (Project)

**Overview:** This FOA encourages Research Conference Grant (R13) applications to conduct health disparities-related meetings, workshops, and symposia. The purpose of the Academic-Community Partnership Conference Series is to bring together academic institutions and community organizations to identify opportunities for reducing health disparities through the use of Community-Based Participatory Research (CBPR). The objectives of meetings conducted as part of this award will be to: (1) establish and/or enhance existing academic-community partnerships; (2) identify community-driven research priorities; and (3) develop long-term collaborative CBPR research agendas. Thus, it is expected these partnerships will lead to grant applications for the support of CBPR projects designed to meet identified community needs. The areas of focus for these partnerships may include one or more of the following community-health issues: preterm birth; infant mortality; sudden infant death syndrome (SIDS); maternal mortality; reproductive health; uterine fibroid tumors; childhood, adolescent, and/or adult obesity; violence prevention; perinatal HBV and HIV/AIDS prevention; HIV/AIDS prevention; asthma; intellectual and developmental disabilities; pediatric injury prevention; and medical rehabilitation.

**Reason for Selection:** This grant opportunity supports possible rural community health research conferences and helps to establish partnership between the university and the community organizations. - *See more at: <http://grants.nih.gov/grants/guide/pa-files/PAR-15-032.html#sthash.hr7Bvm72.dpuf>*

**Matching Requirements:**

**Award Amount:** Applicants may request direct costs of up to \$30,000 per year. Facilities & Administrative (F&A) costs are not allowed.

**Cycle/Dates:** The scope of the proposed project should determine the project period. The maximum project period is 3 years. (Expiration Date: November 18, 2016)

**Special Restrictions:** New; Resubmission grant application



**Grant Name: SBIRT Health Professions Student Training**

---

**Agency:** Substance Abuse and Mental Health Services Administration

**Index Number:** TI-15-001

**Category:** Substance Abuse

**Overview:** The purpose of this program is to develop and implement training programs to teach students in health professions (physician assistants, dentists, pharmacists, nurses, social workers, counselors, and medical students and residents) the skills necessary to provide evidence-based screening and brief intervention and refer patients who are at risk for a substance use disorder (SUD) to appropriate treatment.

**Matching Requirements:** None

**Award Amount:** Up to \$315,000

**Cycle/Dates:** Annual

**Grant Name: “Now is the Time” Project AWARE Community Grants**

---

**Agency:** Substance Abuse and Mental Health Services Administration

**Index Number:** SM-15-012

**Category:** Substance Abuse

**Overview:** The purpose of this program is to support the training of teachers and a broad array of actors who interact with youth through their programs at the community level, including parents, law enforcement, faith-based leaders, and other adults, in Mental Health First Aid (MHFA) or Youth Mental Health First Aid (YMHFA).

**Matching Requirements:** None

**Award Amount:** Up to \$125,000

**Cycle/Dates:** Annual, May 1

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Messely, L., Dessein, J., & Lauwers, L. (2010). Regional identity in rural development: three case studies of regional branding. *APSTRACT*, 4(3-4), 19–24.

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