



The Polis Center
We bring things into perspective.

Community Informatics and Health Geoinformatics

*New Local Perspectives for Health
Research at IU*

October 22, 2010



The Polis Center
We bring things into perspective.

The Polis Center at IUPUI

David Bodenhamer
Executive Director

Overview



- Multidisciplinary research unit of the IU School of Liberal Arts at IUPUI
- Established in 1989
- 25 FTE staff
- Over 500 projects and \$65 million in grant and contract income
- Emphasis on the innovative application of Geographic Information Systems

Areas of Emphasis



Four core areas

- Geoinformatics
- Community Informatics
- Health Geoinformatics
- Spatial Humanities

Collaborative frameworks



- Linking expertise
- Serving as nexus
- Maintaining relationships
- Leveraging projects



The Polis Center
We bring things into perspective.

Community Informatics

Sharon Kandris

Director, Community Informatics

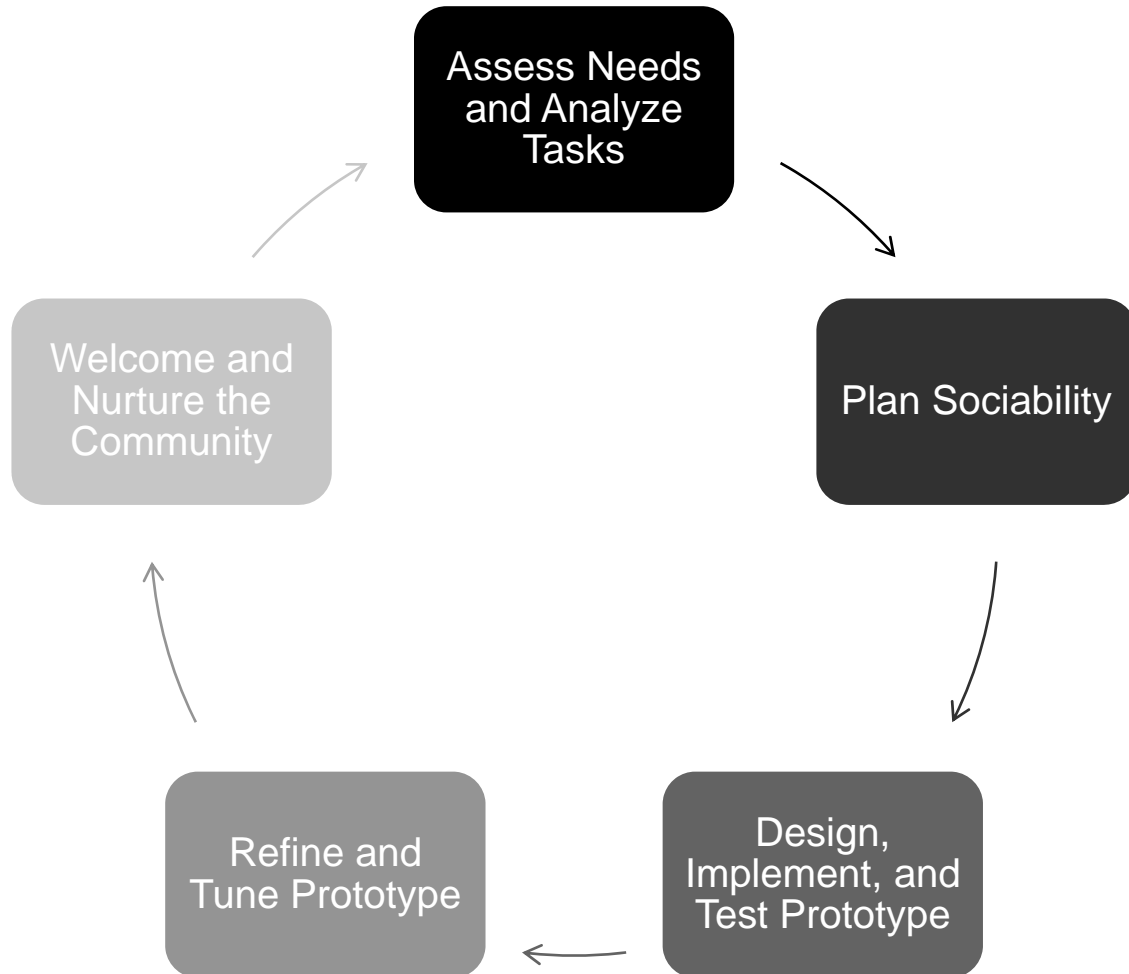


The Polis Center
We bring things into perspective.

CI Research

- 1. Developing and testing technology, tools, and methods to empower communities, nonprofits, and researchers to make better decisions*

Principles of Community Informatics



SAVI provides a free, interactive, up-to-date resource for local, spatially-enabled data and information about Central Indiana to help you make well-informed decisions.

[Learn More ▶](#)

Register

Registration is not required (unless you add your own data) but allows you to save your data and maps for future reference. You can access your saved data at My SAVI.

[Register Now ▶](#)

[SAVIONline](#): New data released on SAVI - 2008 ACS 1yr estimates, emissions by cat, and parcel-based property data. look for 2008 ACS tweets this week!

17 hours ago

[Follow Us on Twitter ▶](#)

Data & Tools



Quick Data

allows you to compare geographic areas, view changes over time and view population in a pie chart, bar chart or line graph.



Community Profiles

allows you to view a detailed report about your geographic area of interest describing the population, economy, education, health, and housing conditions.



Data Tools

allows you to access data in interactive maps and tables. Step-by-step tools walk you through the process of creating a quick map.



Available Data

allows you to upload a list of address or GPS points and map them in SAVI. You can view these points with other SAVI data.

SAVI Data



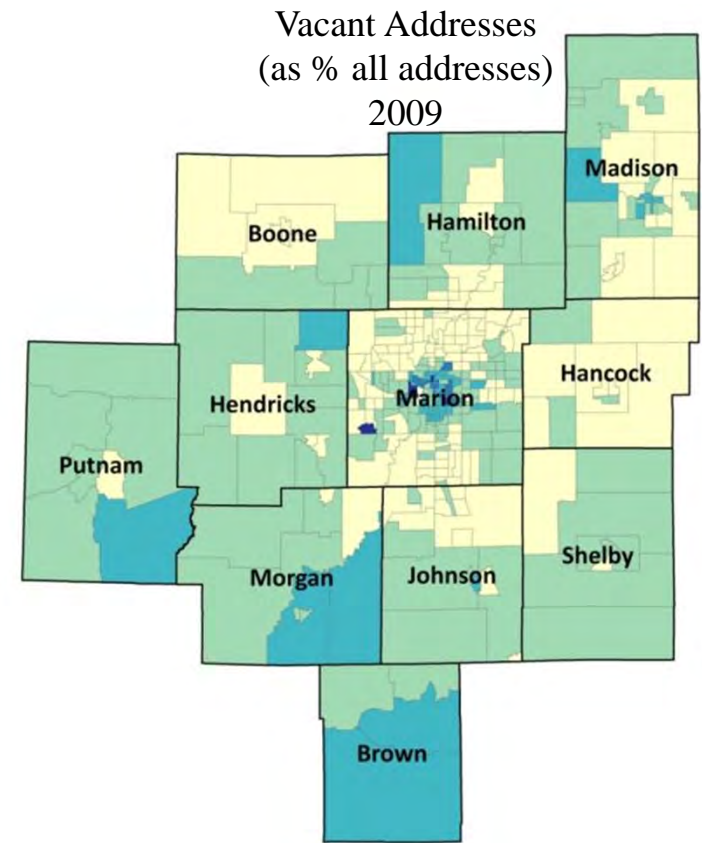
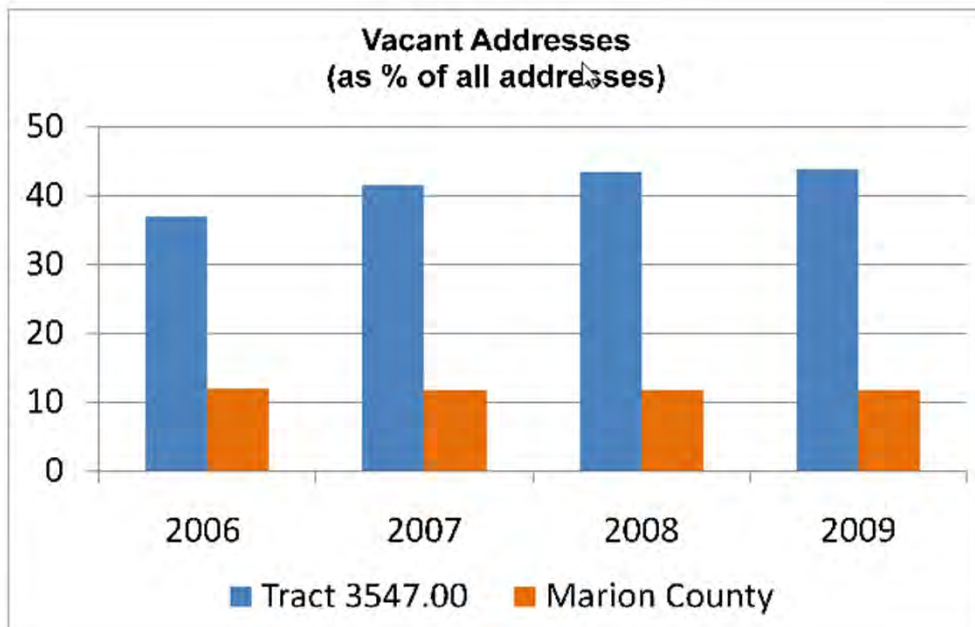
- Reliable, detailed data about small areas
- Historic – time series analysis
- 10,000 “indicators” of social, economic, and physical conditions
- 19,000 locations of community assets and sites
- **Protected Data**

SAVI Tools



- Understanding & Defining Communities and the Issues They Face Through:

- ✦ Digested Information
- ✦ Data Visualization
- ✦ Data Analysis



Legend



Congregation Member Locations and Educational Attainment

★ Second Presbyterian Church

• Congregation Member

Population 25+ with Bachelor's Degree

○ Less than 15%

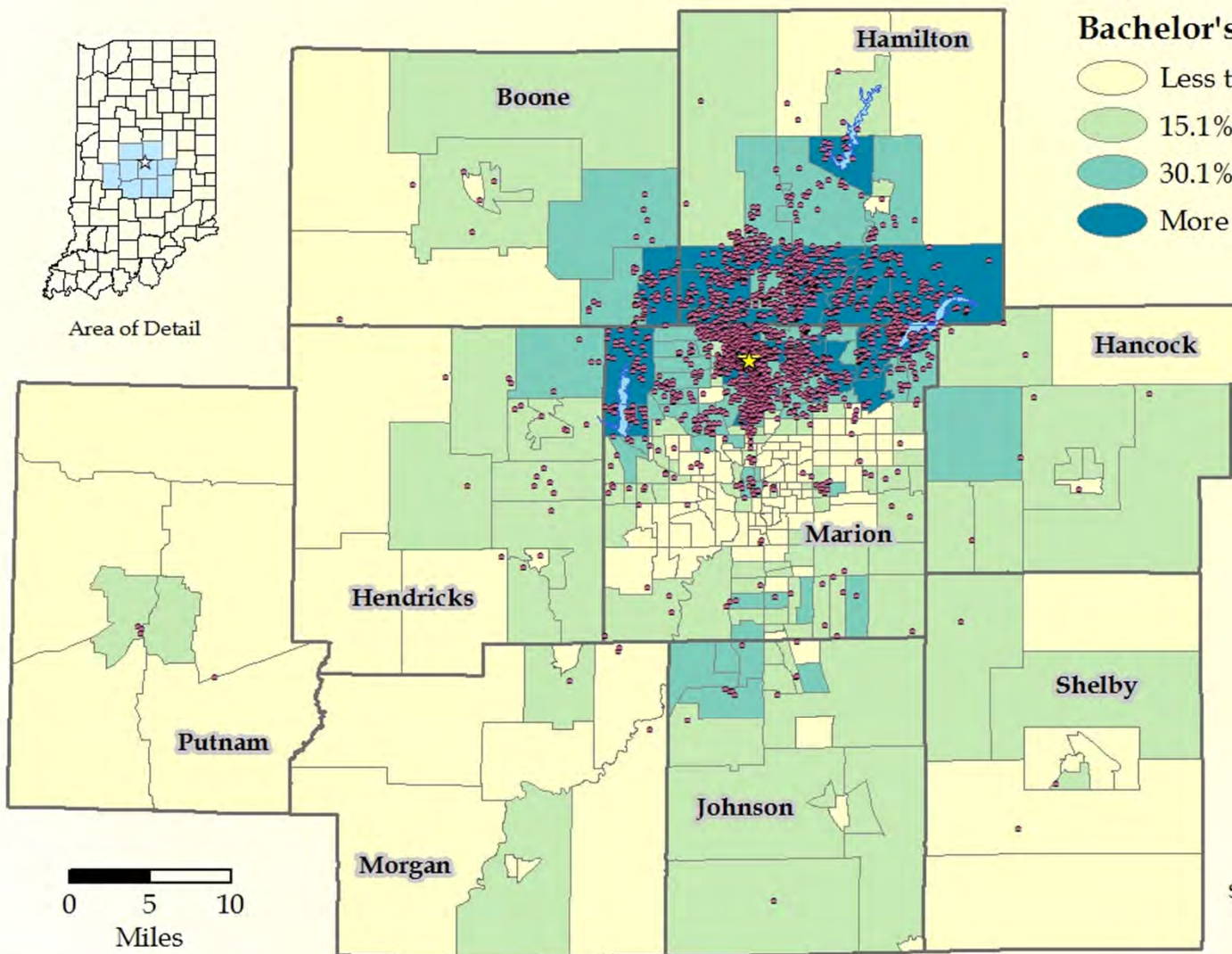
○ 15.1% - 30%

○ 30.1% - 50%

○ More than 50%



Area of Detail



 **The Polis Center**
We bring things into perspective.

 **savi**
information for communities

Sources: SAVI, US Census Bureau

Map created: 10/25/2005

Capacity Building



- Training
- Consulting
- Support
- User Guides
- Nonprofit Capacity Building Conference





Welcome To Diglowa!
[register](#) | [login](#) | [contact us](#)

[Home](#) [About Us](#) [Solutions](#) [Training](#) [Consulting](#) [Use Diglowa](#) [My Diglowa](#) [Help](#)



What is Diglowa?

The Diglowa (www.digiowa.org) is a one-stop source for data and information for communities and organizations in Iowa. It provides local data about the social, economic, and physical conditions of neighborhoods, townships, and counties, and other geographic areas such as school districts. Diglowa summarizes these data into community profiles and allows users to view and analyze detailed data in interactive maps, charts, and tables.

What is the Purpose of Diglowa?

Diglowa seeks to build the capacity of organizations and citizens to use information to make a positive impact in Iowa communities through improved decision making and more effective programs and services. Diglowa's goals are to:

- Provide a comprehensive, reliable, and responsive source of local information about communities in Iowa.
- Build community capacity by helping citizens, organizations, and researchers to use information more effectively.
- Help organizations respond to social issues through more effective policies, programs, research, and actions.

New Developments in Progress



- Better integration of community data
- Tools for knowledge creation and sharing
- Developing and publishing indices (downloadable for use in research and community analysis)
- Communication technologies
- [Data visualization](#)
- Data analysis tools – [exploratory spatial data analysis](#)



The Polis Center
We bring things into perspective.

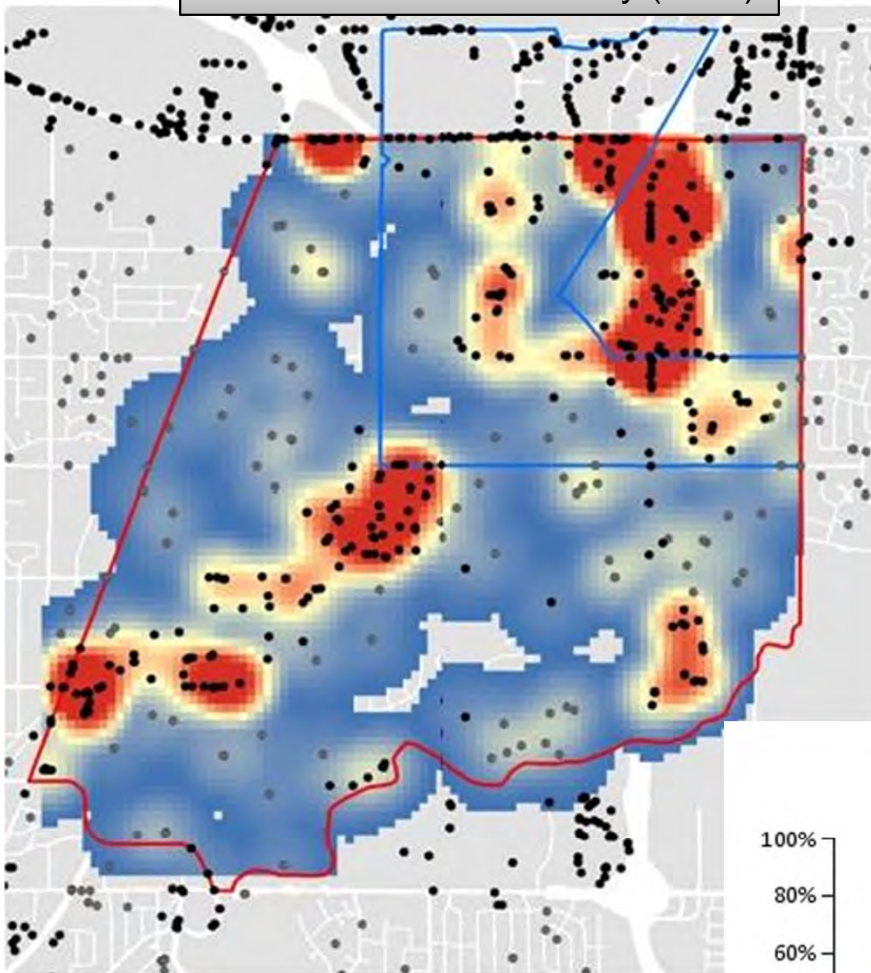
CI Research

2. Using CIS to understand community issues and their impact on quality of life

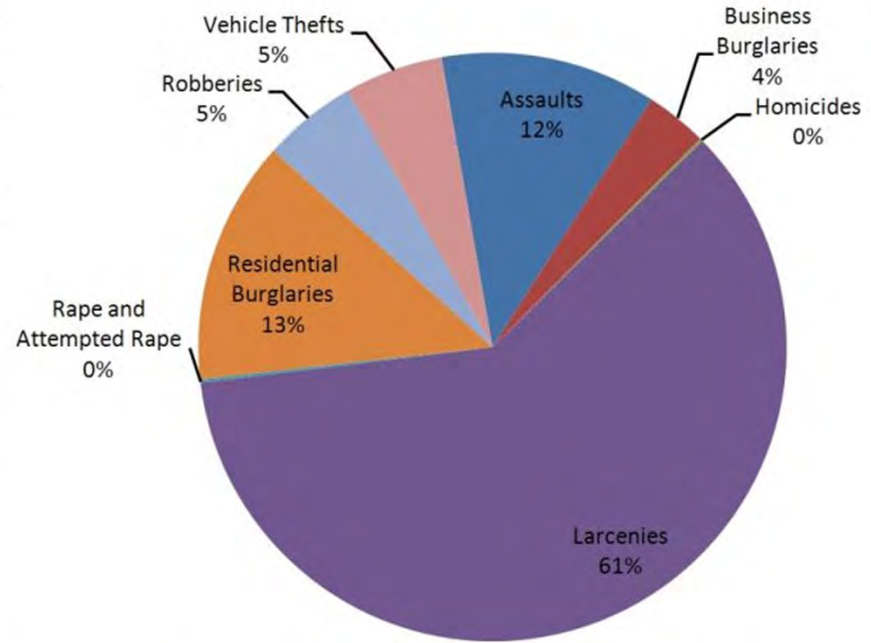
NNIP PARTNERS



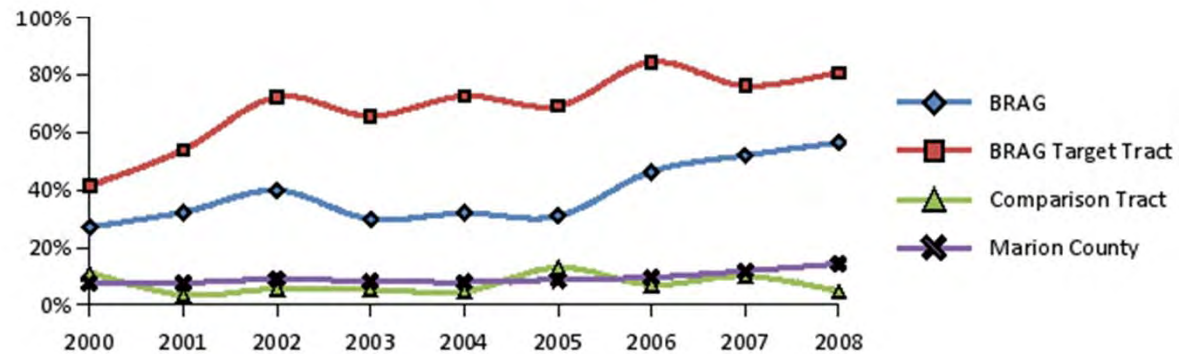
Larcenies – Crime Density (2008)



All Part 1 Crime By Type (2008)



Juvenile Theft, Attempted Theft or Receiving Stolen Property Charges
(as % of All Charges)




Health Knowledge Assessment

BMI Clusters (All Students)

Schools

-  Perry Meridian Middle School
-  Southport Middle School
-  Playground

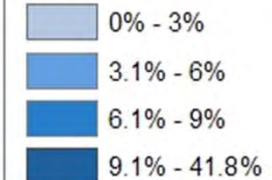
 Interstate

Clusters of High and Low BMI



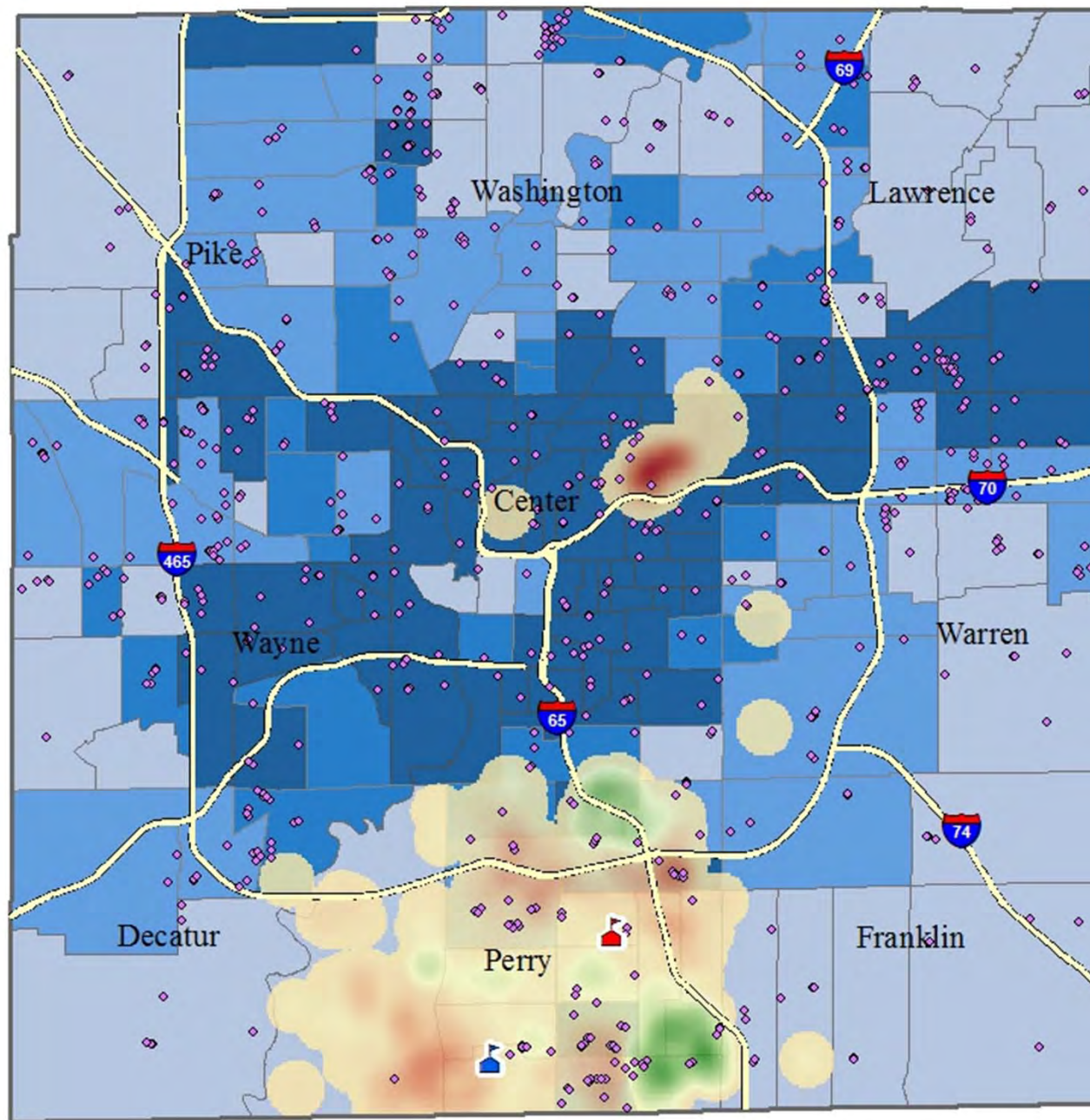
TRACT2000

% Families in Poverty



 Ruth Lilly Health Education Center
Teaching health behaviors that depend on it.

 The Polis Center
We bring things into perspective.





The Polis Center
We bring things into perspective.

Health Geoinformatics

Karen Comer

Director, Collaborative Research

Health Geoinformatics Mission



To develop and support research innovation through integration of geographic information science, medical informatics, community informatics, and public health.

Focus Areas

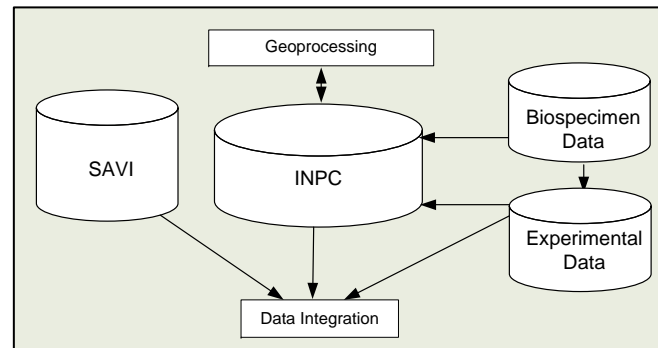


- Systems approach to health – i.e., investigating the interactions of individual, contextual, and organizational factors
- Application of spatial and community information and communication technologies
- Methods to support community-based research

Distinctive Features



- Interdisciplinary partnership representing geographic information science, community informatics, social science, clinical epidemiology, medical informatics, and health services research
- Powerful clinical translational IT infrastructure



Collaborations and Partnerships - Internal



- Regenstrief Institute Inc.
- Indiana Clinical and Translational Sciences Institute (CTSI)
- IU School of Medicine
 - ✦ IU Medical Libraries
 - ✦ Children's Health Services Research
 - ✦ Department of Public Health
 - ✦ Center for Aging Research
- IU School of Nursing
- IU School of Health and Rehabilitative Services
- IU Public Policy Institute
- IU Center on Philanthropy
- IUPUI Department of Geography
- Institute for Research on Social Issues
- Indiana Business Research Center
- Community Grids Lab, IU Pervasive Technologies

Collaborations and Partnerships - External



Local

- Indiana State Department of Health
- Marion County Health Department
- Ruth Lilly Health Education Center
- Indiana Department of Environmental Management
- Department of Health and Kinesiology, Purdue University
- Purdue Extension

National

- National Library of Medicine (Affiliate member, NN/LM)
- Centers for Disease Control and Prevention
- Ohio State University
- Medical University of South Carolina
- Albert Einstein College of Medicine
- School of Public Health, Loma Linda University (CA)

National Outreach Mapping Center

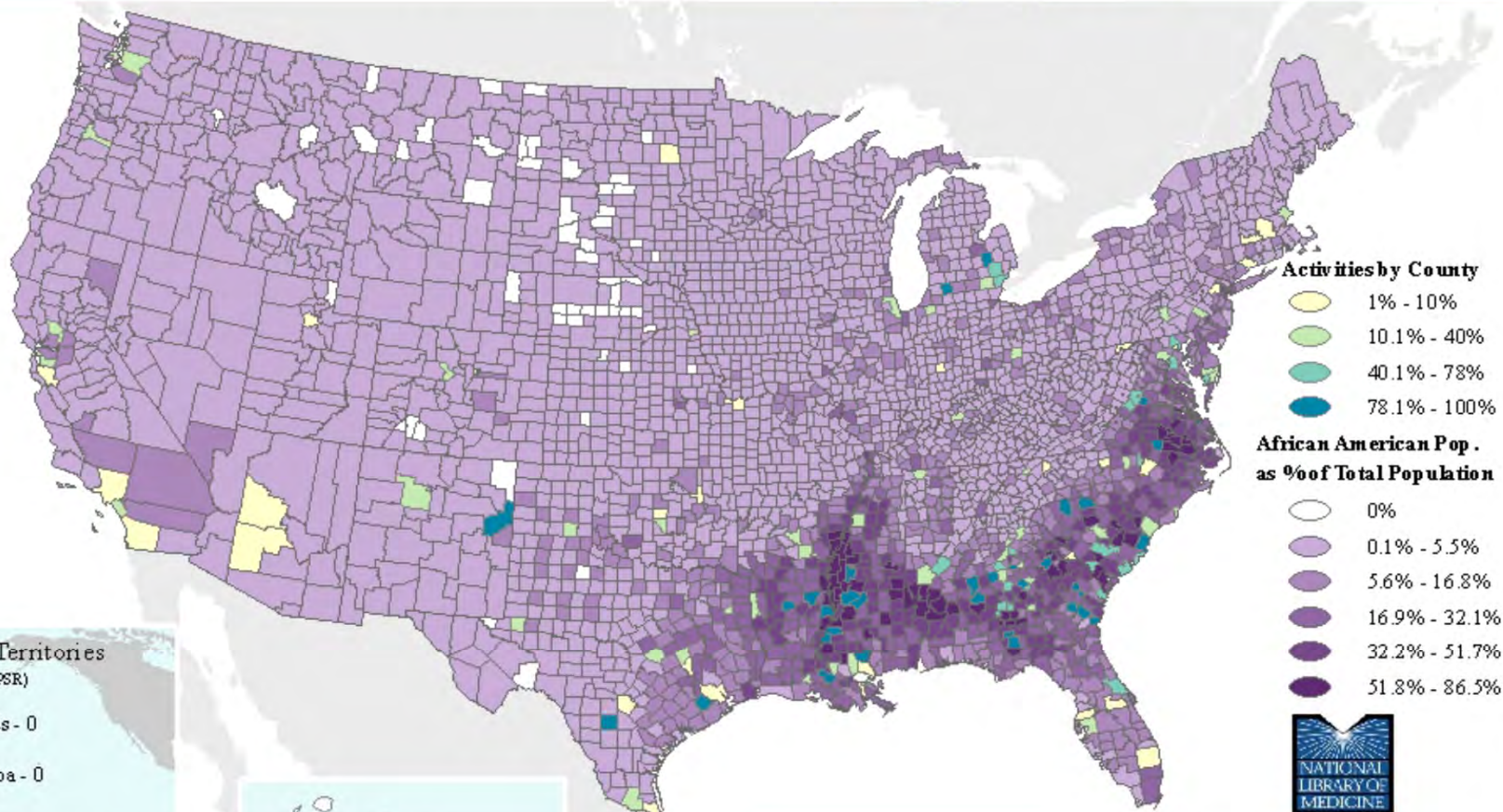
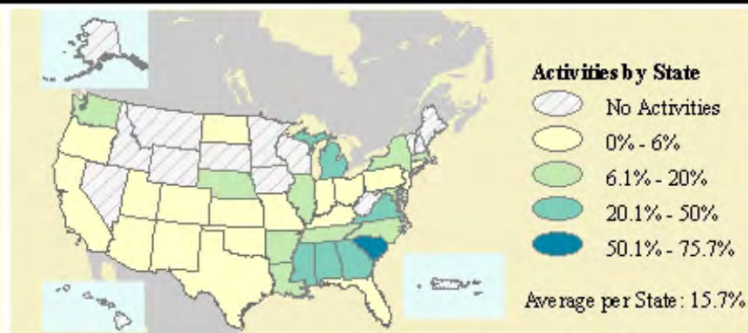


- Established in 2000 in partnership with IU Medical Libraries.
- For the National Network of Libraries of Medicine (NN/LM), National Library of Medicine.
- Developed applications and mapping support for the reporting, planning, and evaluation of NN/LM outreach activities, including:
 - Dynamic, online database (OARF) to allow continual entry of outreach activity reports by NN/LM's eight contracted regional medical libraries (RMLs) and their subcontractors located throughout the country.
 - Online mapping and reporting tool to allow updated outreach activity summary reports and maps to be viewed on a daily basis.

Percent of Activities Involving African Americans

May 1, 2001 - April 30, 2006

Total = 1,515



Source: National Library of Medicine, 8/29/2006

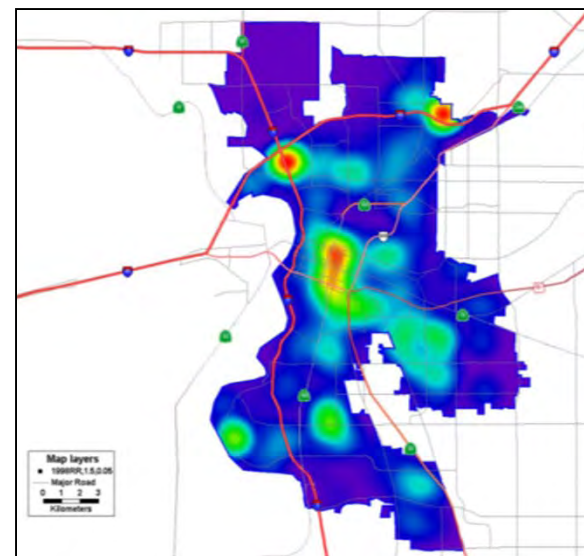
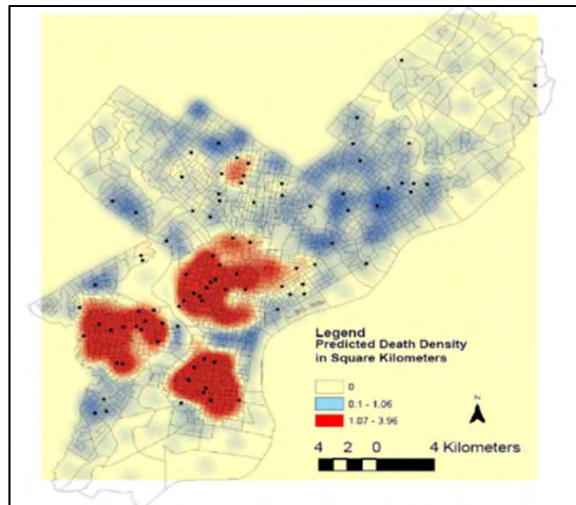
Map created: 8/30/2006

Includes OARF data only

IUPUI Center for Health Geographics



- Catalyzes and supports research to advance the application of geographic information systems and science in public health, healthcare, and health services research.
- Advances IUPUI clinical translational research interests by improving the ability to understand complex relationships between the social and physical environment and health and healthcare.

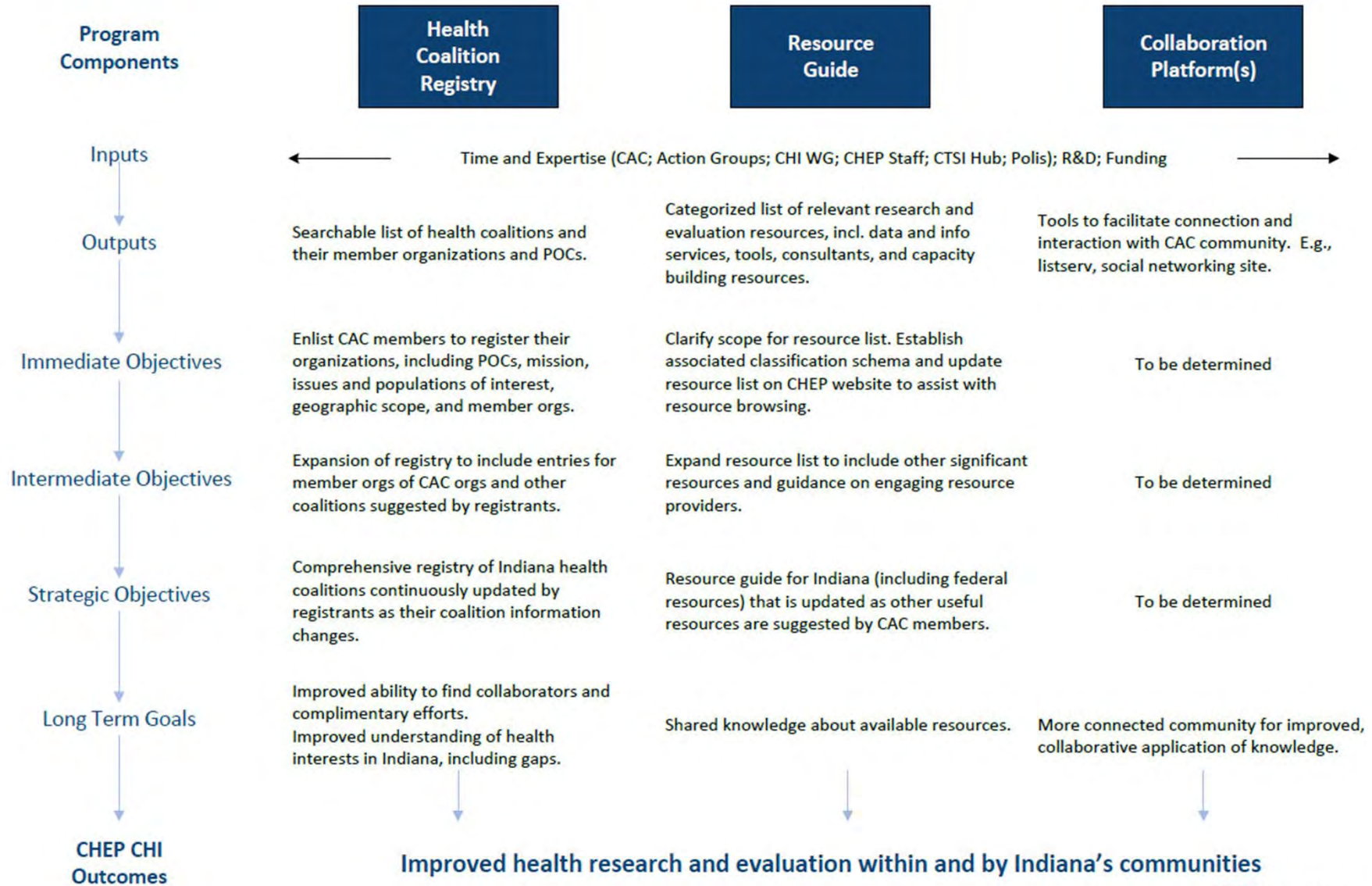


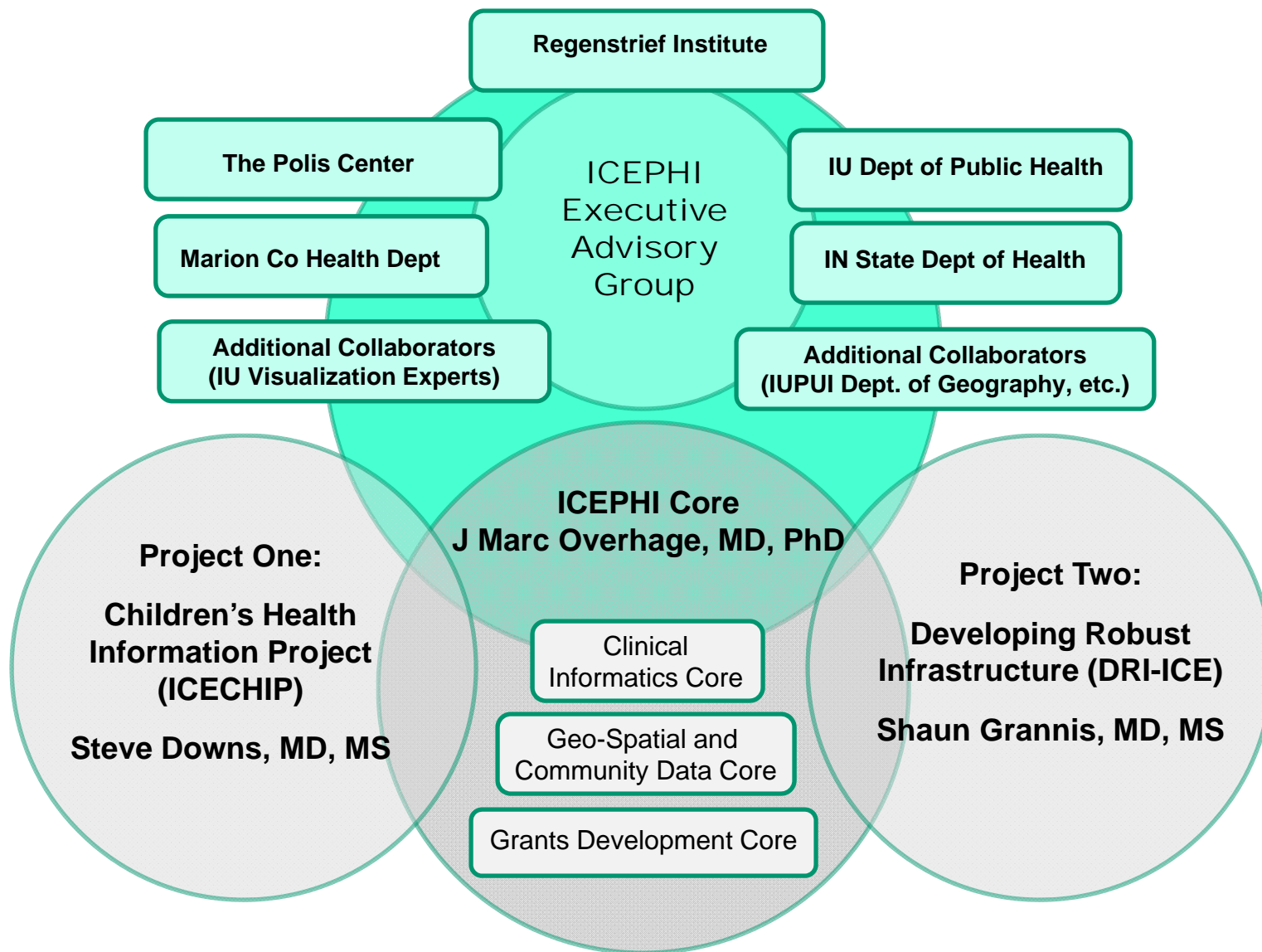
Public Health and Medical Research

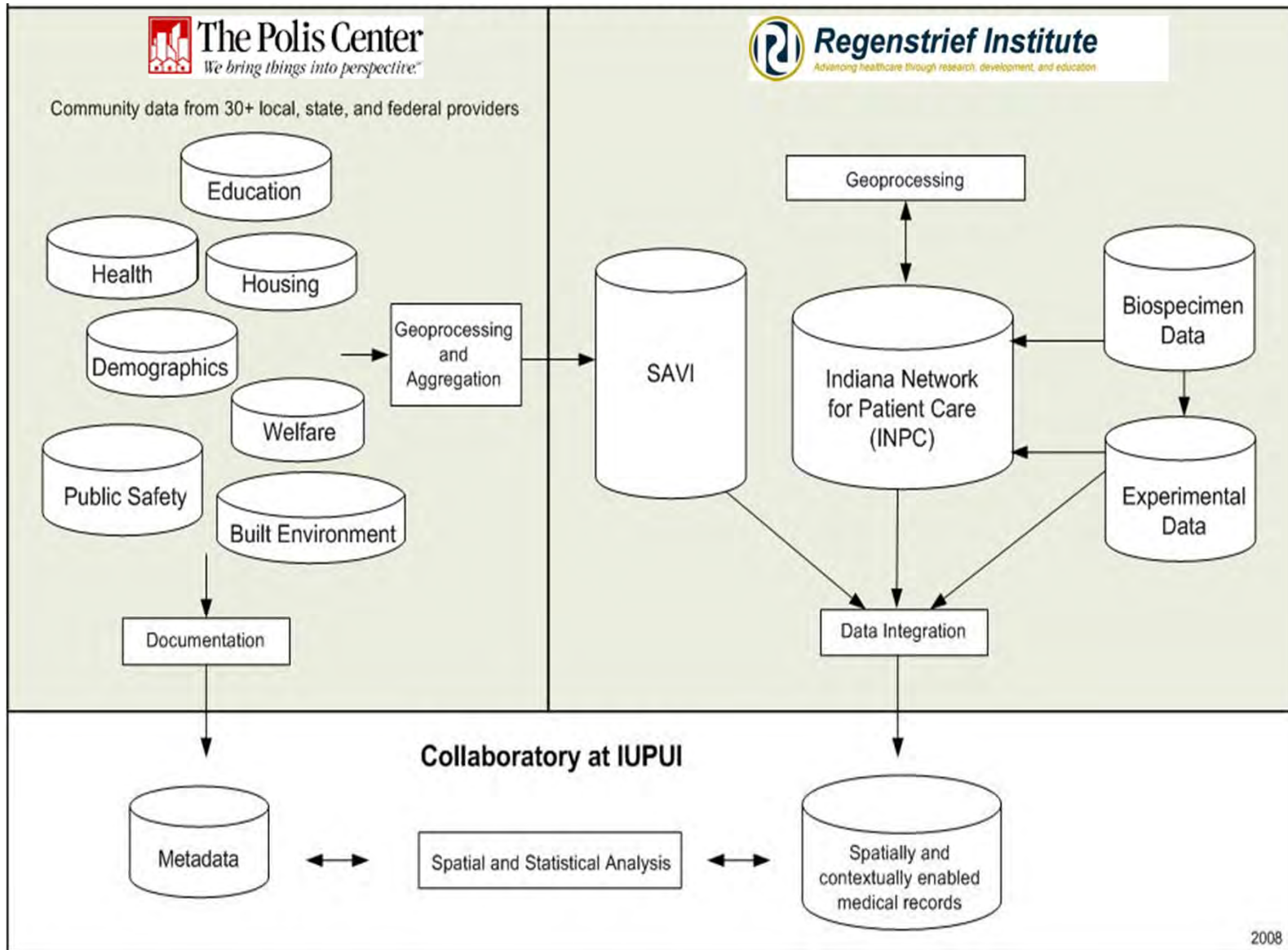


- Predictors of health knowledge (M. Sothmann, MD / C. Mushi-Brunt, PhD)
- Contextual determinants of health (V. Champion, DNS)
- Ecological models of health behavior (K. Russell, DNS)
- Environmental exposure and health risk (M.B. Riner, DNS)
- Environmental determinants of health (G. Liu, MD,, MPH)
- Social determinants of health (S. Wiehe, MD, MPH / M.B. Riner, DNS)
- Health disparities (R.Fife, MD. MPH)
- Exploratory disease mapping/geographic knowledge discovery (I. Yamada, PhD)
- Supporting community-based participatory research (J. Martin, DNS)
- Investigation of prescription opiate abuse (Eric Wright, PhD)

CHEP Community Health Informatics Strategic Plan for Use of Information and Communication Technologies (ICT)







Thank You!



Questions and Answers