

What the Indiana CTSI HUB is Trying to Accomplish

Bill Barnett

Director, Information Infrastructures, Indiana CTSI

IU School of Medicine and Indiana University Information Technology Services

barnettw@iu.edu

disclaimer:

I don't care about
Any Particular
Technology...

What is a CTSI?

- An Institutional NIH Clinical and Translational Science Award (CTSA) “to improve human health by transforming the research and training environment to enhance the efficiency and quality of clinical and translational research” (see <http://www.ctsaweb.org>),
- AKA “Bench to Bedside”
- Currently 46 but eventually 60 centers in a national network
- 5 National Strategic Goals:
 - A. National Clinical and Translational Research Capability (development, approval, activation, enrollment, and completion of Clinical Trials)
 - B. Training and Career Development of Clinical/Translational Scientists (recruit, educate, train, and promote clinical and translational investigators)
 - C. Enhancing Consortium-Wide Collaborations (facilitates researcher networking across national institutions and topic domains, creating a virtual community)
 - D. T1 Translational Research (moving discoveries through “first time in humans” studies)
 - E. Enhancing the Health of Our Communities and the Nation (promote the translation of the results of research into practice and public policy)

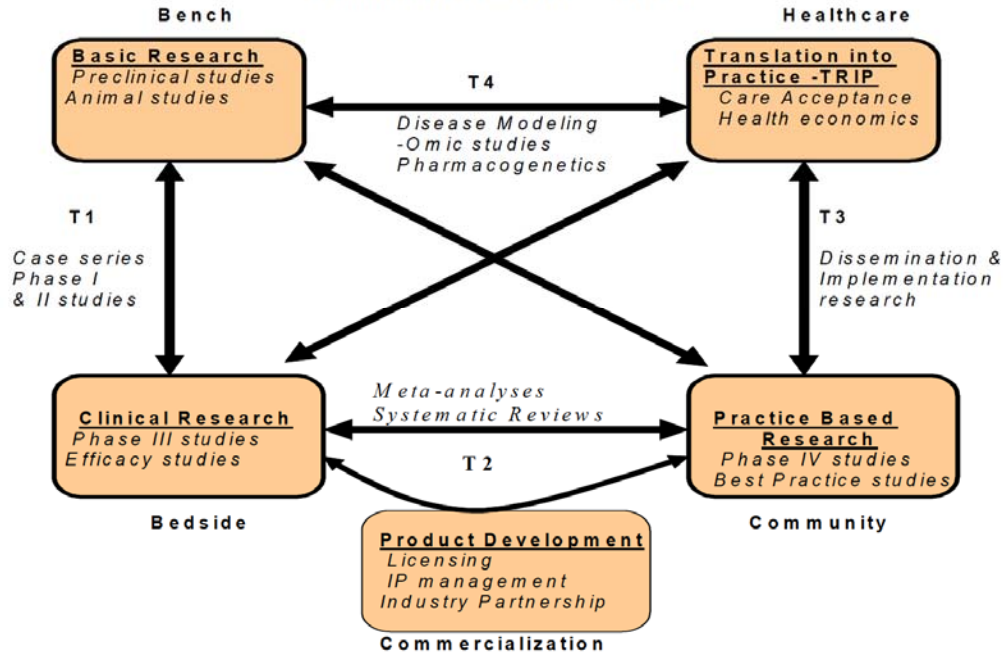
<http://indianactsi.org>

What is the Indiana CTSI?

- A Statewide Health Care research partnership (IUSM, IU, Purdue, Notre Dame)
- Mission: “Increase translational research to improve the health (and economy) of the Indiana population” to:
 - I. Create Translational Research Acceleration Programs and support Pilot Projects.
 - II. Train a new Cadre of Translational Researchers.
 - III. Foster Robust Community Engagement
 - IV. Build Facile and Comprehensive Research Resources and Technologies
 - V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

Translational Circle



What are the Indiana CTSI Programs?

- I. Create Translational Research Acceleration Programs and Support Pilot Projects.
 - Project Development Teams (PDTs) and Indiana CTSI Pilot Funding Opportunities
- II. Train a new cadre of Translational Researchers.
 - Research, Education, Training, and Career Development
 - Bioethics and Subject Advocacy
- III. Foster Robust Community Engagement
 - Community Health Engagement Program (CHEP)

What are the Indiana CTSI Programs? (continued)

IV. Build Facile and Comprehensive Research Resources and Technologies

- Participant and Clinical Interaction Resources (PCIR – integrate clinical facilities and patient recruitment),
- the Indiana Clinical Research Center (ICRC (previously GCRC) – to support clinical trials)
- the Clinical Research Resource Center (CRRC – outpatient clinical trials)
- Translational Technology Resources (TTR), in other words...Cores
- Research Ethics, Education, and Policy (REEP) and Regulatory Knowledge Support (RKS)

V. Leverage the Resources of the Greater Indiana Community

- Partnerships with Clarian, Lilly, WellPoint, Cook, Fairbanks, and other non-profit and for-profit health care entities

<http://indianactsi.org>


What Is the Indiana CTSI HUB?




- The Web Portal for Indiana CTSI translational activities
- A Repository of Indiana CTSI program information and datasets
- Integrated Tools that support translational programs

<http://indianactsi.org>

What is the HUB cyberinfrastructure?

 Joomla! A research virtual organization customization of Joomla! Web 2.0 component-based CMS (3700 publicly available components) based on NanoHUB.

 Federated Identity Management: use your institutional login to partner statewide or nationally through InCommon/Shibboleth



HUBzero Consortium (Purdue, Indiana U., Clemson, and Wisconsin) has formed to ensure a progressive software roadmap, sustainability, licensing, and support for HUB software



Ontological Mapping of HUB content in partnership with the National Center for Biomedical Ontology

<http://indianactsi.org>

What Goals does the HUB have?

- Be the central gateway for Indiana ‘translational’ activities
- Ease of use and easily discoverable services
- Support Web Services based interoperability
- Support federated identities for inter-institutional collaboration *
- Ontologically-based content tagging to ease discovery *
- A sustainable business model for the software
- Part of our partnership with Purdue (frankly)

* - cyberinfrastructure in development

<http://indianactsi.org>

Internal Grant Management System

Customized from the Open Journal System software

- A. National Clinical and Translational Research Capability
- B. Training and Career Development of Clinical/Translational Scientists
- C. Enhancing Consortium-Wide Collaborations
- D. T1 Translational Research
- E. Enhancing the Health of Our Communities and the Nation
- Y** I. Create Translational Research Acceleration Programs and support Pilot Projects.
- II. Train a new Cadre of Translational Researchers.
- III. Foster Robust Community Engagement
- IV. Build Facile and Comprehensive Research Resources and Technologies
- V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

Integrated Search of HUB Content

(Publications, Grants, PubMed, Clinical Trials, Cores, Contributions, Members)

HUB Component

- A. National Clinical and Translational Research Capability
- Y** B. Training and Career Development of Clinical/Translational Scientists
- C. Enhancing Consortium-Wide Collaborations
- D. T1 Translational Research
- Y** E. Enhancing the Health of Our Communities and the Nation
- Y** I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y** II. Train a new Cadre of Translational Researchers.
- III. Foster Robust Community Engagement
- Y** IV. Build Facile and Comprehensive Research Resources and Technologies
- Y** V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

Ranked, Citable Content Submissions (Documents, Presentations, Animations, Simulations) HUB Component

- A. National Clinical and Translational Research Capability
- Y** B. Training and Career Development of Clinical/Translational Scientists
- C. Enhancing Consortium-Wide Collaborations
- D. T1 Translational Research
- Y** E. Enhancing the Health of Our Communities and the Nation
- Y** I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y Y** II. Train a new Cadre of Translational Researchers.
 - III. Foster Robust Community Engagement
- Y** IV. Build Facile and Comprehensive Research Resources and Technologies
- Y** V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

Interactive Translational Technologies and Resources (TTR) (Core Service Discovery, ultimately a Marketplace) Custom Component

- Y** A. National Clinical and Translational Research Capability
- Y** B. Training and Career Development of Clinical/Translational Scientists
- C. Enhancing Consortium-Wide Collaborations
- D. T1 Translational Research
- Y** E. Enhancing the Health of Our Communities and the Nation
- Y** I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y Y** II. Train a new Cadre of Translational Researchers.
 - III. Foster Robust Community Engagement
- Y Y** IV. Build Facile and Comprehensive Research Resources and Technologies
- Y** V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

In Progress: Community Health Engagement Program (CHEP) (Community Portal) Custom Component

- Y A. National Clinical and Translational Research Capability
- Y B. Training and Career Development of Clinical/Translational Scientists
 - C. Enhancing Consortium-Wide Collaborations
 - D. T1 Translational Research
- Y E. Enhancing the Health of Our Communities and the Nation
- Y I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y Y II. Train a new Cadre of Translational Researchers.
 - Y III. Foster Robust Community Engagement
- Y Y IV. Build Facile and Comprehensive Research Resources and Technologies
- Y V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

In Progress: Private Group Collaboration Tool (File Sharing, Email, Fine Grained Group Management, HIPAA data)

- Y Y A. National Clinical and Translational Research Capability
- Y B. Training and Career Development of Clinical/Translational Scientists
- Y C. Enhancing Consortium-Wide Collaborations
 - D. T1 Translational Research
- Y E. Enhancing the Health of Our Communities and the Nation
- Y Y I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y Y II. Train a new Cadre of Translational Researchers.
 - Y III. Foster Robust Community Engagement
- Y Y Y IV. Build Facile and Comprehensive Research Resources and Technologies
- Y V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

In Progress: Industry Partner Discovery Tool (Search Industry Tech Transfer Officers by sub-specialty)

- Y Y A. National Clinical and Translational Research Capability
- Y B. Training and Career Development of Clinical/Translational Scientists
- Y C. Enhancing Consortium-Wide Collaborations
- Y D. T1 Translational Research
- Y E. Enhancing the Health of Our Communities and the Nation
- Y Y Y I. Create Translational Research Acceleration Programs and support Pilot Projects.
- Y Y II. Train a new Cadre of Translational Researchers.
- Y III. Foster Robust Community Engagement
- Y Y Y IV. Build Facile and Comprehensive Research Resources and Technologies
- Y V. Leverage the Resources of the Greater Indiana Community

<http://indianactsi.org>

What is Next for the Indiana CTSI HUB?

- Surveys
- Private Discussion Forums (specifically in support of Grant Review)
- E-Forms
- Jobs or Job Candidate postings
- Shared Storage
- Newsletters and email list support
- Knowledge Base
- RSS Feeds

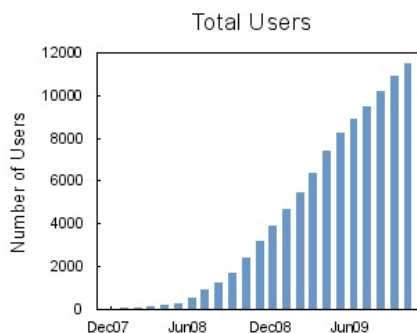
<http://indianactsi.org>

What ELSE is Next for the Indiana CTSI HUB?

- Open Source release of HUBzero Software (LGPL license)
- Faculty profiles to support 'Research Networking' – VIVO (Cornell), Loki (Iowa), Profiles (Harvard), or Digital CV (Pittsburgh)
- Patient Recruitment – possibly Vanderbilt's *Research Match*
- Adopt a Clinical Trials Management System
- Adopt Vanderbilt's REDCap Clinical Data Management system
- Promote HUB as Translational Resource for other CTSA's
- Develop Network Analysis and a Recommender system

<http://indianactsi.org>

How are we doing so far?



- Statewide scope creates need for basic communication and discovery
- Grant Program went from 33 to 104 applications the first year using the online review tool
- HUB most heavily used by Grant or Program Administrators
- Simple but effective tools have proven most utilized

<http://indianactsi.org>

The Indiana CTSI HUB Team

- Bill Barnett (Lead): barnettw@iu.edu
- Lilith Reeves (Chief Scientist): lreeves@iupui.edu
- Anurag Shankar (Technical Lead): ashankar@indiana.edu
- Mike McLennan (HUB Architect): mmclenna@purdue.edu
- Bob Davis (Usability): davisrol@iupui.edu
- Joe Hunt (Evaluation): johunt@iupui.edu
- Samantha Scahill (Content Management): sscahill@iupui.edu
- Jere Odell (Education and Bioethics): jdodell@iupui.edu
- Elaine Skopelja (Library Informatics): eskopelj@iupui.edu
- Beth Whipple (Library Informatics): ewhipple@iupui.edu
- Craig Sanders (Software Engineering): crasand@iupui.edu
- Jim Mullen (Software Engineering): mullen2@indiana.edu
- Michael Grobe (Software Engineering): dgrobe@iupui.edu
- Steve Snyder (Systems Engineering): snyder13@purdue.edu

<http://indianactsi.org>
