The *ca*ncer *B*iomedical *I*nformatics *G*rid **(caBIG™)**

Testimony to the Hearing on the Functional Requirements for the National Health Information Network National Committee on Vital and Health Statistics (NCVHS)

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caBIG™ is an innovative bioinformatics program at the National Cancer Institute (NCI)

- caBIG™ supports the integration and collaboration of 50 Cancer Centers working for a common goal of integrated data, tools and methodologies to accelerate cancer research goals at the National Cancer Institute for Bioinformatics (NCICB), the cancer Biomedical Informatics Grid (caBIG™)
- The goal of caBIG™ is to create a virtual web of interconnected data, individuals, and organizations which will:
  – redefine how research is conducted
  – care is provided
  – patients / participants interact with the biomedical research enterprise
- The principles driving caBIG™ are:
  – Open Source
  – Open Access
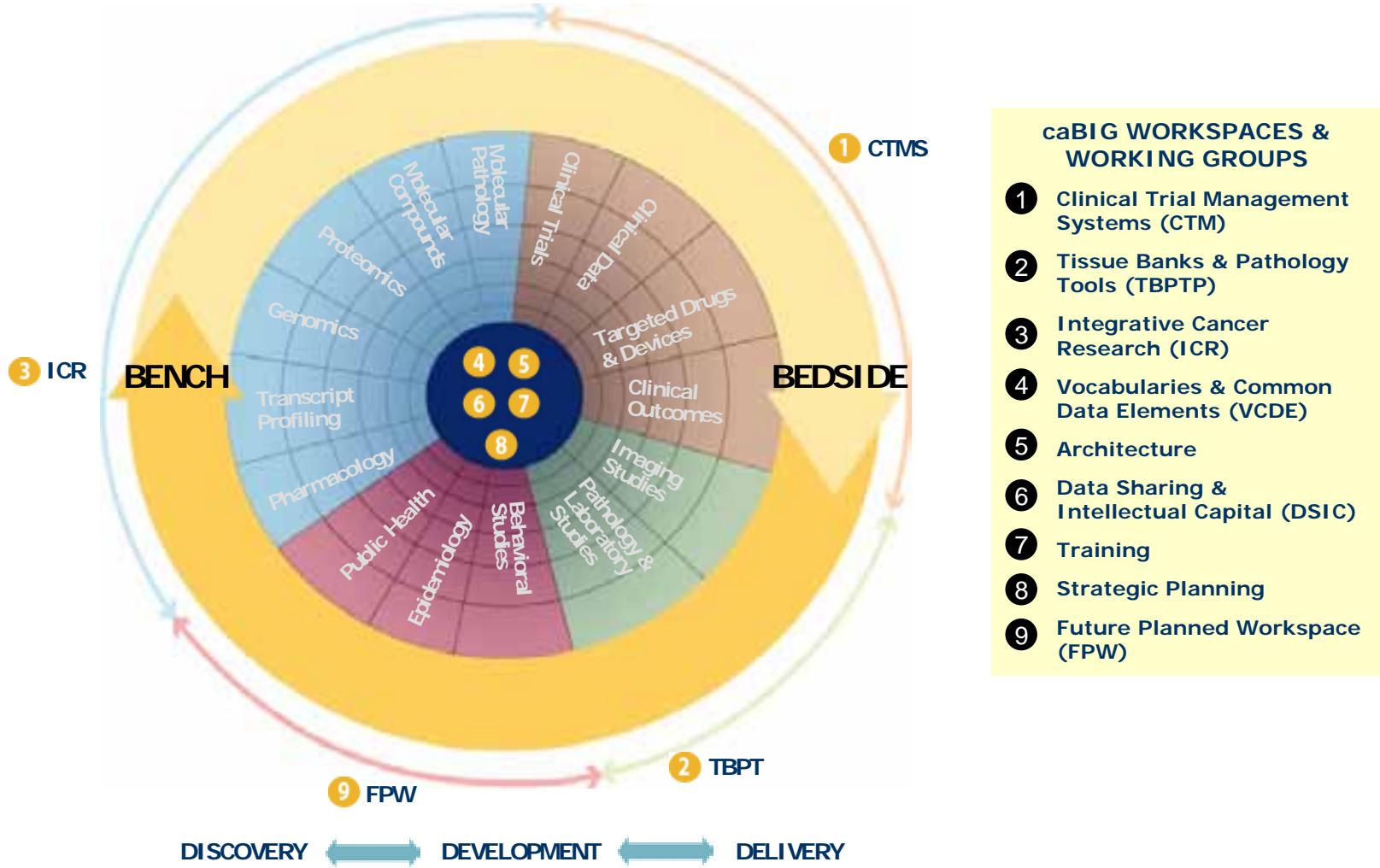 – Open Development
  – Federated Model

caBIG will facilitate sharing of infrastructure, applications, and data across multiple cancer research programs
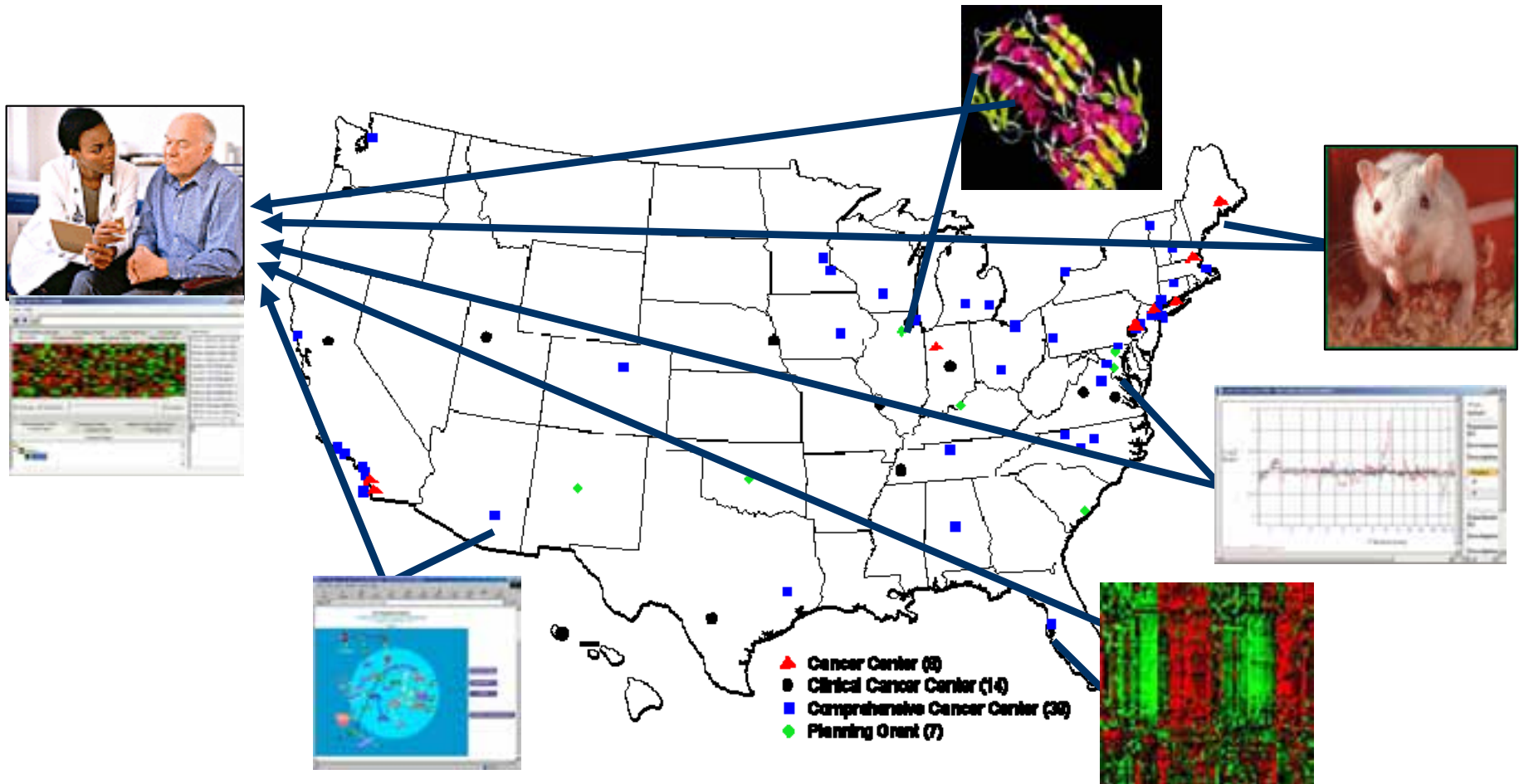
Cancer Center (8)
Clinical Cancer Center (14)
Comprehensive Cancer Center (39)
Planning Grant (7)

Our caBIG™ approach balances objectives from Bench to Bedside, therefore interlocking both communities to ensure success

caBIG WORKSPACES & WORKING GROUPS
1. Clinical Trial Management Systems (CTM)
2. Tissue Banks & Pathology Tools (TBPTP)
3. Integrative Cancer Research (ICR)
4. Vocabularies & Common Data Elements (VCDE)
5. Architecture
6. Data Sharing & Intellectual Capital (DSIC)
7. Training
8. Strategic Planning
9. Future Planned Workspace (FPW)

caBIG™ Involves a Large Community with a Wide Range of Interests

9Star Research
Albert Einstein
Ardais
Argonne National Laboratory
Burnham Institute
California Institute of Technology-JPL
City of Hope
Clinical Trial Information Service (CTIS)
Cold Spring Harbor
Columbia University-Herbert Irving
Consumer Advocates in Research
    and Related Activities (CARRA)
Dartmouth-Norris Cotton
Data Works Development
Department of Veterans Affairs
Drexel University
Duke University
EMMES Corporation
First Genetic Trust
Food and Drug Administration
Fox Chase
Fred Hutchinson
GE Global Research Center
Georgetown University-Lombardi
IBM
Indiana University
Internet 2
Jackson Laboratory
Johns Hopkins-Sidney Kimmel
Lawrence Berkeley National Laboratory
Massachusetts Institute of Technology
Mayo Clinic
Memorial Sloan Kettering
Meyer L. Prentis-Karmanos
New York University

Ohio State University-Arthur G. James/Richard Solove
Oregon Health and Science University
Roswell Park Cancer Institute
St Jude Children's Research Hospital
Thomas Jefferson University-Kimmel
Translational Genomics Research Institute
Tulane University School of Medicine
University of Alabama at Birmingham
University of Arizona
University of California Irvine-Chao Family
University of California, San Francisco
University of California-Davis
University of Chicago
University of Colorado
University of Hawaii
University of Iowa-Holden
University of Michigan
University of Minnesota
University of Nebraska
University of North Carolina-Lineberger
University of Pennsylvania-Abramson
University of Pittsburgh
University of South Florida-H. Lee Moffitt
University of Southern California-Norris
University of Vermont
University of Wisconsin
Vanderbilt University-Ingram
Velos
Virginia Commonwealth University-Massey
Virginia Tech
Wake Forest University
Washington University-Siteman
Wistar
Yale UniversityNorthwestern University-Robert H. Lurie

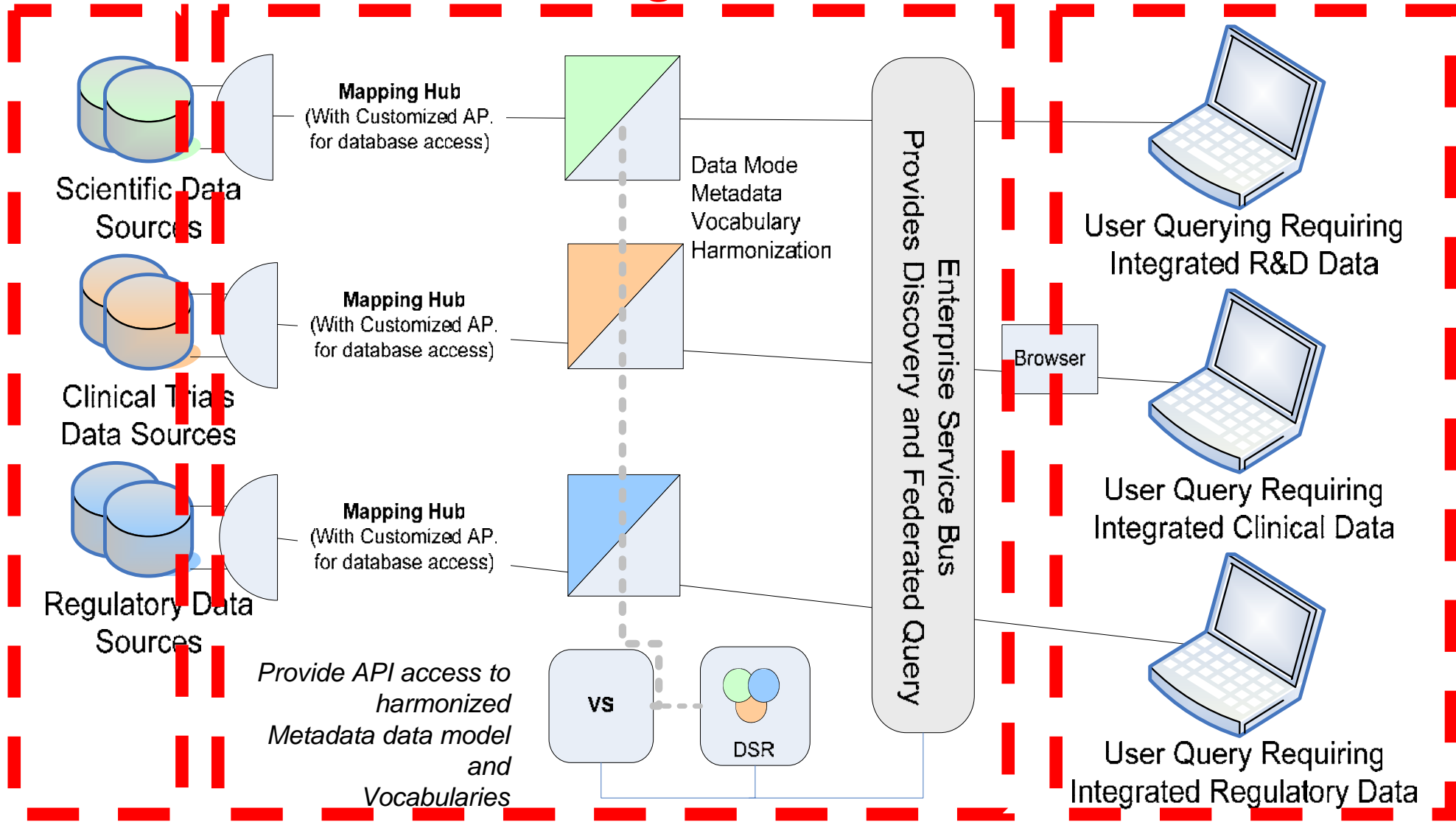caBIG™ cancer Biomedical Informatics Grid™ an initiative of the National Cancer Institute

Semantic Integration and an Enterprise Service Bus Provides the Mechanism for Interoperability

What is BRIDG?

- An open *community of stakeholders* interested in developing standards for exchanging information about clinical trials

- A *bridge* between
  - clinical trial domain experts and technical experts
  - different models of clinical trials information

- A formal model of the *shared semantics* of regulated clinical trials research

- The semantic *foundation for application and message development* in HL7, caBIG, and CDISC

BRIDG forms the foundation for interoperable module development
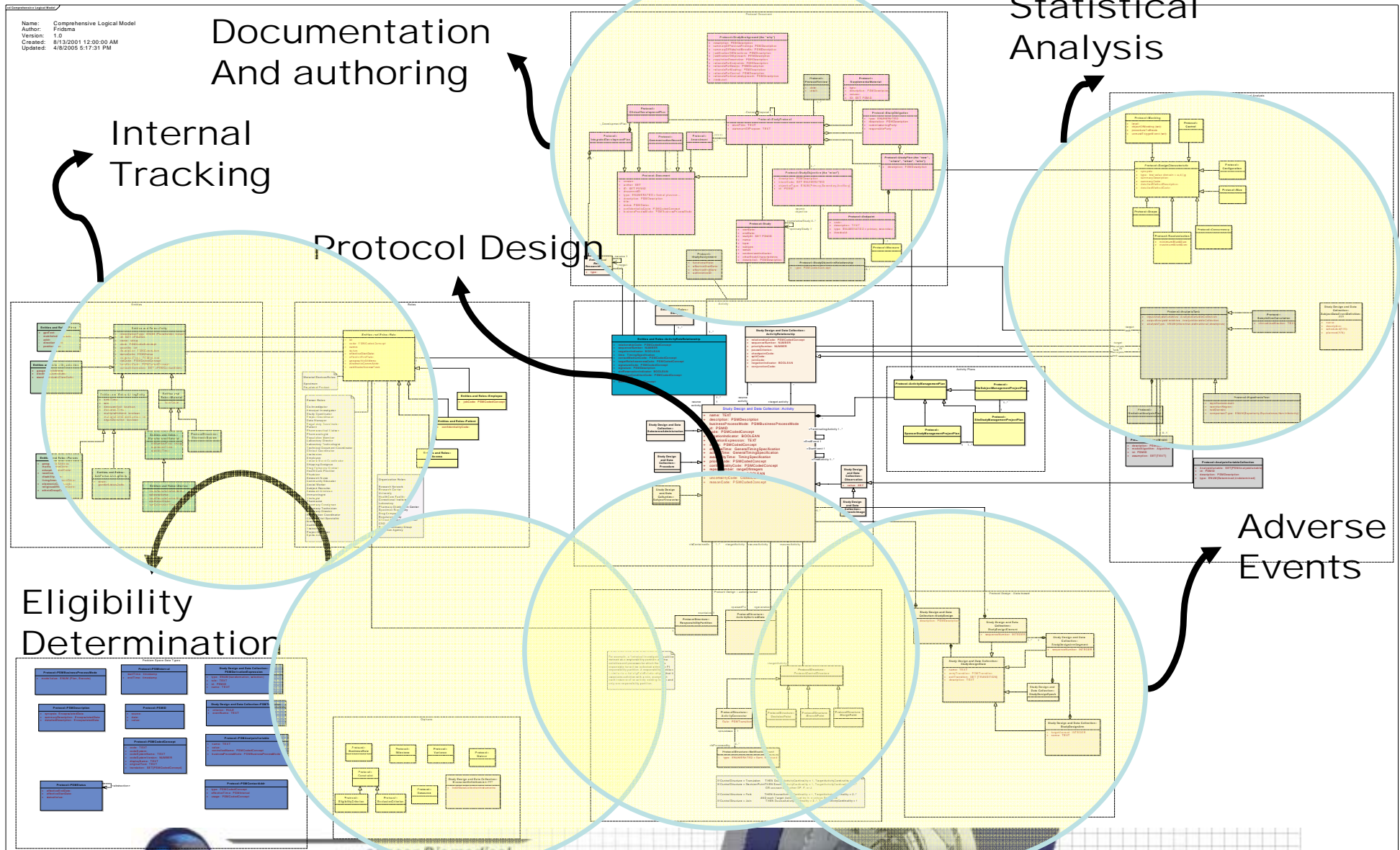
Functional Requirements on the Nationwide Health Information Network (highlights*)

- The NHIN should support core functions which provide the means for the operation of biomedical research

- The NHIN should provide for the secure and robust transmission of scientific data, including high-bandwidth datasets such as those generated by medical imaging and gene expression profiling

- The NHIN platform should allow for the establishment of systems based on Services-Oriented Architectures (SOA)

- The NHIN should leverage the BRIDG meta-model as a standard means of exchanging relevant clinical trials-related data

- The NHIN can take advantage of the prototype establishment in caBIG™ of services providing for semantic interoperability, such as caDSR and EVS

* See written testimony for specific details

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The Future for caBIG™ and NHIN

- caBIG™ will continue to participate in the development of NHIN, and will plan on participating with the program in a productive way
- The caBIG™ program will leverage, whenever possible, the infrastructure deployed by the NHIN, as part of our commitment to software and infrastructure reuse
- Members of the caBIG™ community will integrate their software with the emerging NHIN, at early phases of the project, and provide feedback and assistance wherever possible
- The NHIN is invited to participate in caBIG™ 's open process in whatever way is possible and appropriate, in order to foster close relationships between the two groups, and to ensure that any overlap in development is closely coordinated
- The NHIN is encouraged to make use of any caBIG™ tooling that ise useful for the achievement of their goals

* See written testimony for specific details

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