caBIG Interactive Overview - Slides and Text
Version of Overview Narration
February 9, 2004

Welcome

Welcome to the interactive overview of the cancer Biomedical Informatics Grid or caBIG initiative. To commence the overview, simply click on the title slide and watch the presentation. If at anytime, you would like to move through the overview slides in a different order or pace – please use the options located in the navigation panel on the right side of you screen.

caBIG defined

caBIG (**ca**ncer **B**iomedical **I**nformatics **G**rid) is a cancer research platform that promises to expedite progress in cancer research. It will create a network that links organizations, institutions and individuals to enable the sharing of cancer research infrastructure, data and tools.

caBIG is distinctive in a number of important ways:

- Joins the various fields of cancer research - from etiologic research to prevention, early detection and treatment

- Being designed and built by an open federation of organizations

- Based on common standards

- Being developed according to open source and open access principles

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
Measuring progress
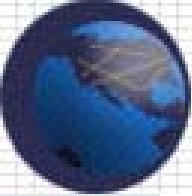Impact
Getting involved
More information

caBIG defined

caBIG is a novel cancer research platform. The goal of caBIG is to enable members of the cancer research community to answer their cutting-edge research questions more rapidly, and at reduced cost, by creating a vehicle that allows them to share information and tools more effectively.

In essence, caBIG is an informatics platform that is open to all who wish to use it, and completely voluntary in nature. Based on common standards, and built by members of the cancer research community, caBIG links institutions, organizations and individuals together in a manner that promises to accelerate progress in all aspects of cancer research – from etiologic research to prevention, early detection and treatment.

caBIG is distinctive in a number of important ways. It is being built by an open federation of organizations in the public, private and academic sectors, and thus draws on the strengths and resources of diverse communities. Its architecture is based on open source and open access principles of software development, and therefore can be added to and enhanced by anyone. And it is being built – under the coordinating supervision of the National Cancer Institute -- for the benefit of everyone in the cancer research community – including cancer patients and the public – in the United States and around the world.

Our complete commitment, and that of our partners in cancer centers and the private sector, is a driving force in the creation of caBIG - but caBIG will ultimately evolve into a self-sustaining community that encompasses the entire cancer research community – and quite possibly the broader biomedical research community – both Nationally and Internationally.

5

Why caBIG is needed now - challenges facing cancer research

The cancer research environment is changing:

- Explosion of information generated by new methods and technologies
- Exponential growth in our ability to characterize and understand cancer
- Push for trans-disciplinary team science

These advances improve our ability to eliminate the suffering and death due to cancer.

However - the benefits of these advances are being inhibited by a critical set of challenges facing the cancer research community:

- Obstacles to sharing and integration of data and lack of common data standards for data sharing
- No unifying infrastructure for cancer research technologies and lack of common standards for bioinformatics tools

caBIG defined
Challenge
Beneficiaries
Participants so far
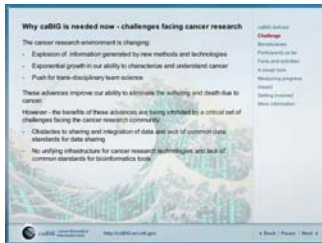Facts and activities
A closer look
Measuring progress
Impact
Getting involved
More information

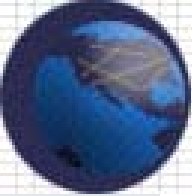**Why caBIG is needed now - challenges facing cancer research**

This is a critical time in the history of cancer research.

The advances in cancer research methods and technologies in recent years have resulted in an explosion of information and knowledge about cancers and their treatment. Our ability to characterize and understand cancer is growing exponentially. Information from genetic studies, protein studies and clinical trials, to name just a few areas of research, is rapidly providing us with new insights and answers.

These advancements in science and technology, the push for trans-disciplinary team science, and the breadth and depth of information already in the cancer research community at large, present us with enormous opportunities to improve our ability to eliminate suffering and death due to cancer. A critical set of challenges, however, currently inhibits our capacity to harvest these opportunities.

Most cancer researchers currently have access to only a small fraction of the data that has already been collected by members of the cancer research community. And most cancer researchers have no way of giving other researchers easy access to the data they have collected. Even within a single lab, cancer researchers have difficulty integrating data from different technologies because of a lack of common data standards and other issues.

In addition – there is no unifying infrastructure or common standards for the technologies that cancer researchers use to support their research. This means that researchers cannot easily share technologies or benefit from the innovative informatics tools developed by others.

Why caBIG is needed now - challenges facing cancer research

caBIG seeks to address these challenges by creating a community-based network or grid that enables cancer researchers to easily share tools, data and infrastructure according to agreed, common standards.

With caBIG, the community has come together to provide structure and resources to:

- Enable innovative research teams to be connected with other research activities and data sources

- Facilitate connections between geographically dispersed groups and individuals in different scientific areas

The creation of the caBIG network will also support key HHS, NIH and NCI goals – including NCI's 2015 challenge goal to eliminate the suffering and death due to cancer.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
Measuring progress
Impact
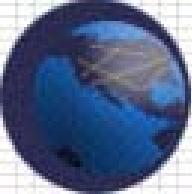Getting involved
More information

8

Why caBIG is needed now - challenges facing cancer research (continued)

Taking cancer research to the next level requires the ability to easily share tools, data and infrastructure according to agreed, common standards. This is exactly what caBIG seeks to do. It is an opportunity for the community to come together to address a critical issue in ways that optimally suit their needs.

With caBIG, the activities of – and the information arising from -- innovative research teams becomes connected in a broad network or grid with other innovative research activities and data sources. In this manner, researchers can share and contribute where they have specific needs or capabilities. caBIG will provide the structure and resources to facilitate this connection between geographically dispersed groups and individual researchers working in a variety of different scientific areas.

By paving the way for a more robust and integrated cancer research infrastructure that enables faster advances and solutions – caBIG also supports key Health and Human Services, National Institutes of Health and National Cancer Institute goals, including the 2015 challenge goal to eliminate the suffering and death due to cancer.
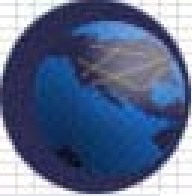
Beneficiaries of caBIG

Because caBIG is an open source, open access activity, every cancer researcher, research institution, and company who chooses to participate stands to benefit.

caBIG provides access to tools, shared data, standards, and development plans to any who wish to use them.

As more members of the cancer research community participate and caBIG evolves, data will increasingly become accessible and in formats that are compatible with a host of community-developed tools. Researchers can use caBIG resources, and contribute resources to caBIG based on their needs and interests – without in any way compromising their innovation or creativity. And caBIG will help researchers avoid needless time- and resource-intensive duplicative efforts.

Ultimately, because caBIG will provide a common unifying force that facilitates and accelerates progress in cancer research, the most important beneficiaries of caBIG will be cancer patients and the public at large.

caBIG Participants so far

During the caBIG pilot phase:

- NCI and the NCI-designated Cancer Centers have been the primary groups involved since the caBIG pilot started in July 2003. NCI is committed to partnering with the Cancer Center community and ensuring their needs are met

- Cancer Center participants will continue to guide the development, evaluation and adaptation of the caBIG initiative throughout the pilot

As the grid is established:

- Additional nodes will be added to the caBIG network from within NCI, other NIH institutes and interested federal health agencies, industry groups and the broader biomedical research community

Ultimately:
- caBIG will hopefully become a large community of voluntary participants from national and international biomedical research fields

caBIG Participants so far

To date, the National Cancer Institute and National Cancer Institute or NCI-designated Cancer Centers have been the primary group involved in the pilot phase of caBIG. Involving the cancer center community from the beginning is consistent with the National Cancer Institute's commitment to develop caBIG with the participation of the cancer research community, in a way that directly addresses their needs. And because caBIG is an open source, open access process, other members of the cancer research community are free to become involved at any time.

Since the caBIG pilot was kicked off in July of 2003, more than 50 interested NCI-designated Cancer Centers have participated in the development of the vision, approach and structure of caBIG. Participating Cancer Centers contributed project ideas to test the feasibility of caBIG -- based on existing innovative tools and available data sets -- and are now beginning pilot project activities. Going forward through the pilot phase, the Cancer Center participants will continue to guide the development, evaluation and adaptation of the caBIG initiative.

As the grid is established over the next year, the National Cancer Institute's vision is to attract additional nodes to the network from within the National Cancer Institute and its grantees, other NIH institutes and interested federal health agencies, industry groups and the broader biomedical research community. Some of these groups have already contributed ideas to the development of the caBIG vision.

Ultimately, the National Cancer Institute hopes that caBIG will form into a large community of voluntary participants from national and international biomedical research fields all of whom share a common commitment to the importance of open and shared bioinformatics tools, standards, infrastructure and data.
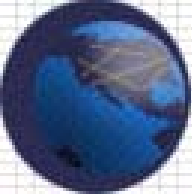
13

caBIG Facts and activities

Comprehensive information on caBIG facts and activities to date is available on the caBIG website at: http://caBIG.nci.nih.gov.

To see an overview of key facts and activities – select the areas you are interested in knowing more about from the items in the panel on the right side of your screen.
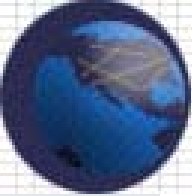
caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
➜ Goals
➜ Activities to date
➜ Structure
➜ Participants (2004)
➜ Technical principles
➜ Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities

Comprehensive information on caBIG facts and activities to date is available on the caBIG website.

An overview of key caBIG facts and activities is provided in this section of the presentation – just select the areas you are interested in knowing more about from the items in the navigation panel on the right side of your screen.
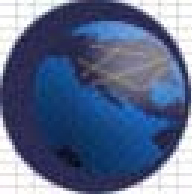
caBIG Facts and activities – Goals

The key goals of the caBIG pilot phase are as follows:

- Illustrate that a spectrum of Cancer Centers with varying needs and capabilities can be joined in a common network of shared data, applications, and technologies

- Demonstrate that Cancer Centers, in collaboration with NCI, will develop new enabling tools and systems that could support multiple Cancer Centers

- Demonstrate that Cancer Centers will actively use the network and realize greater value in their cancer research endeavors by using the network

- Create an extensible infrastructure that will continue to be expanded and extended to members of the Cancer Research community

caBIG Facts and activities – Structure

The central elements of the caBIG pilot organization are the Workspaces. Workspaces are defined as areas or virtual environments where caBIG pilot activities are grouped. Each Workspace includes projects or activities with a common focus and addresses an area of need as identified by the Cancer Center Community. View a table with additional details.

The Workspaces are divided into two groups according to their specific focus areas: Domain Workspaces and Cross Cutting Workspaces.

Within individual Workspaces, participants undertake project level activities as Developers and Adopters. Based on the identified needs, specific software products and solutions (e.g., standards, documentation) are developed by Developers and tested, validated and applied by Adopters. The final products or solutions are shared amongst the caBIG community.

The supporting elements of the caBIG organization are the Working Groups. Working Groups provide guidance and support to the caBIG pilot Workspaces and to the initiative as a whole.

There are two main types of Working Groups: the Strategic Level Working Groups and Workspace Working Groups. Together the Working Groups play a synergistic role, even though the exact focus of each group varies according to its functions. Collaboration amongst the various Working Groups enhances their ability to support the overarching goals of the caBIG initiative.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
  Goals
  Activities to date
  Structure
  Participants (2004)
  Technical principles
  Support for caBIG activities
A closer look
Measuring progress
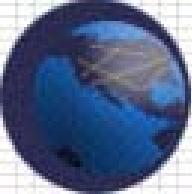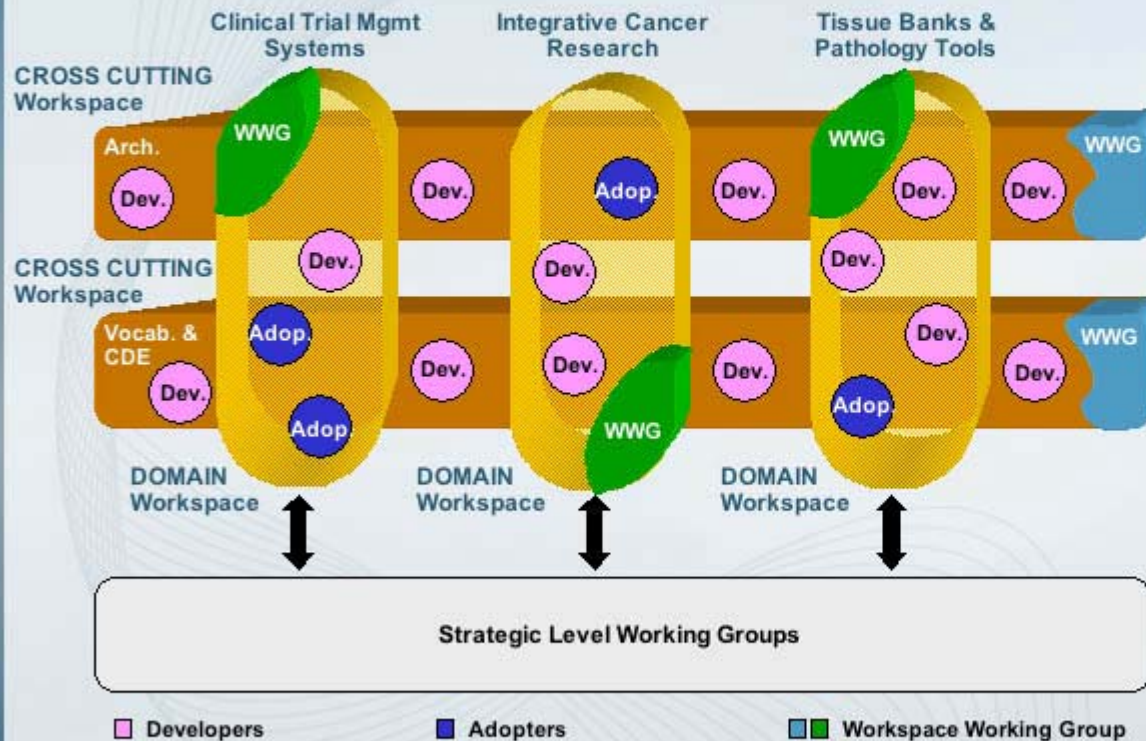Impact
Getting involved
More information

caBIG cancer Biomedical Informatics Grid   http://caBIG.nci.nih.gov

◄ Back | Pause | Next ►

19

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure

  Participants (2004)

  Technical principles
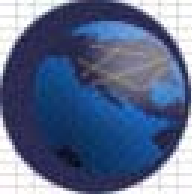 Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- Case Western Reserve University—Ireland
- City of Hope
- Duke University
- Northwestern University—Robert H. Lurie
- University of California Irvine—Chao Family
- University of California, San Francisco
- University of Iowa—Holden
- University of Minnesota
- University of Nebraska—Eppley
- University of Pennsylvania—Abramson
- University of Pittsburgh
- University of Wisconsin
- Vanderbilt University—Ingram
- Wake Forest University
- Yale University

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure
  Participants (2004)
  Technical principles
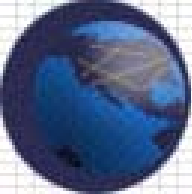 Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- Burnham Institute
- Cold Spring Harbor
- Columbia University—Herbert Irving
- Dartmouth—Norris Cotton
- Duke University
- Fox Chase
- Georgetown University—Lombardi
- Memorial Sloan Kettering
- Meyer L. Prentis—Karmanos
- New York University
- Northwestern University—Robert H. Lurie
- Oregon Health and Science University
- Thomas Jefferson University—Kimmel
- University of California San Francisco
- University of Chicago
- University of Iowa—Holden
- University of Michigan
- University of North Carolina—Lineberger
- University of Pennsylvania—Abramson
- University of South Florida—H. Lee Moffitt
- Vanderbilt University—Ingram
- Washington University—Siteman
- Wistar

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
Goals

Activities to date

Structure

Participants (2004)

Technical principles
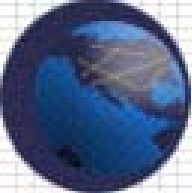
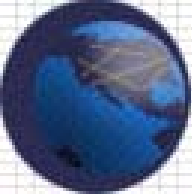Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- Dartmouth—Norris Cotton
- Indiana University
- Jackson Laboratory
- Johns Hopkins—Sidney Kimmel
- Thomas Jefferson University—Kimmel
- Northwestern University—Robert H. Lurie
- University of Alabama at Birmingham
- University of Arizona
- University of North Carolina—Lineberger
- University of Pennsylvania—Abramson
- University of Pittsburgh
- Virginia Commonwealth University—Massey
- Washington University—Siteman

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure
  Participants (2004)
  Technical principles
  Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG *cancer Biomedical Informatics Grid*   http://caBIG.nci.nih.gov

◀ Back | Pause | Next ▶

23

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

**Workspace (and associated
Working Group):**

Clinical Trial Management
Systems

Integrative Cancer
Research

Tissue Banks and
Pathology Tools

**Vocabularies and
Common Data Elements**

Architecture

**Strategic Level
Working Group:**

Data Sharing and
Intellectual Capital

Strategic Planning

Training

- Albert Einstein
- Fred Hutchinson
- Jackson Laboratory
- Mayo Clinic
- University of California—Davis
- University of Hawaii
- University of Pittsburgh

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure

  Participants (2004)

  Technical principles
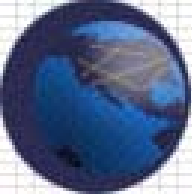 Support for caBIG
  activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG *cancer Biomedical Informatics Grid*   http://caBIG.nci.nih.gov   ◀ Back | Pause | Next ▶

24

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- Cold Spring Harbor
- Duke University
- Georgetown University—Lombardi
- Fred Hutchinson
- Ohio State University—Arthur G. James/ Richard J. Solove
- University of Chicago
- University of Pittsburgh
- University of Wisconsin
- Washington University—Siteman

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure
  Participants (2004)
  Technical principles
  Support for caBIG activities
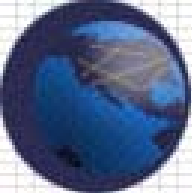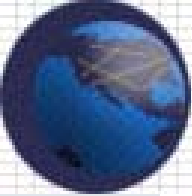
A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- University of Arizona
- City of Hope
- Cold Spring Harbor
- Fred Hutchinson
- Jackson Laboratory
- Johns Hopkins—Sidney Kimmel
- Oregon Health and Science University
- Thomas Jefferson University—Kimmel
- University of Iowa—Holden
- University of North Carolina—Lineberger
- University of Michigan
- University of Minnesota
- University of Pittsburgh
- Washington University—Siteman

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
 Goals
 Activities to date
 Structure
Participants (2004)
 Technical principles
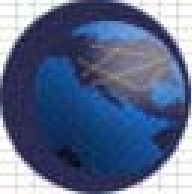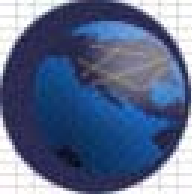 Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- City of Hope
- Cold Spring Harbor
- Duke University
- Fox Chase
- Fred Hutchinson
- MD Anderson
- St Jude Children's Research Hospital
- University of Alabama at Birmingham
- University of Colorado
- University of Iowa—Holden
- University of Pennsylvania—Abramson
- University of Pittsburgh
- University of Southern California—Norris
- University of Vermont
- Washington University—Siteman
- Yale University

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals

  Activities to date

  Structure

  Participants (2004)

  Technical principles

  Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG cancer Biomedical Informatics Grid   http://caBIG.nci.nih.gov   ◄ Back | Pause | Next ►

27

caBIG Facts and activities – Participants (2004)

The NCI-designated Cancer Centers participating in the caBIG pilot are listed below according to the various caBIG Workspaces and Working Groups.

Select a Workspace or Strategic Level Working Group of interest for details.

Workspace (and associated Working Group):

Clinical Trial Management Systems

Integrative Cancer Research

Tissue Banks and Pathology Tools

Vocabularies and Common Data Elements

Architecture

Strategic Level Working Group:

Data Sharing and Intellectual Capital

Strategic Planning

Training

- Cold Spring Harbor
- Institute for Cancer Prevention
- Johns Hopkins—Sidney Kimmel
- Mayo Clinic
- Oregon Health and Science University
- University of California—Davis
- University of Chicago
- University of Iowa—Holden
- University of Pennsylvania—Abramson
- University of Pittsburgh

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities
  Goals
  Activities to date
  Structure
  Participants (2004)
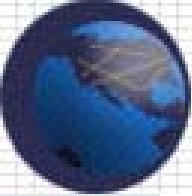 Technical principles
  Support for caBIG activities

A closer look

Measuring progress

Impact

Getting involved

More information

caBIG Facts and activities – Technical principles

caBIG activities will be undertaken according to the following caBIG technical principles:

- Open source
- Open access
- Open Development
- Federated

These principles ensure that caBIG activities are open and accessible to the caBIG community and any others who want to participate.

caBIG's technical principles are aligned with the principles that are the basis for NCI's core bioinformatics infrastructure – caCORE. It is envisaged that caBIG and caCORE activities will be complementary and build on each others' strengths. To support this goal, an Architecture Workspace and a Vocabularies and Common Data Elements Workspace have been established to facilitate coordination and communication between caBIG and caCORE activities.

Additional information on the caCORE infrastructure is available on the NCI Center for Bioinformatics (NCICB) website at http://ncicb.nci.nih.gov/core.

caBIG Facts and activities – Support for caBIG activities

NCI is providing resources to establish the caBIG network and to support the pilot project activities. NCI-designated Cancer Centers participating in the pilot will undertake projects and related activities according to agreed Statements of Work and will be funded via contract mechanisms. Support for caBIG pilot activities will be complementary to other mechanisms for bioinformatics support and funding.

Over time, the evolving role of the caBIG Working Groups and the further development of the caBIG community will probably result in changes to the funding and support model for caBIG. The initiative will become more self-supporting and tools and information resources developed within the caBIG community will become increasingly important ways of integrating new efforts into the grid. For example - the caBIG community will provide training resources, support for use and adoption of tools, informational Workshops, and tools to facilitate broader use of caBIG by interested organizations.

The NCI Center for Bioinformatics (NCICB) will also play a key ongoing support role in ensuring consistency, setting standards, and providing information and tools to assist the caBIG community.

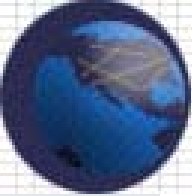### A closer look – caBIG Workspaces and Working Groups

The activities of the caBIG community are undertaken within Workspaces and Working Groups.

To see an overview of the activities of the caBIG Workspaces (and associated Working Groups) and the Strategic Level Working Groups–select the areas you are interested in knowing more about from the items in the panel on the right side of your screen.

More detailed information on the caBIG Workspaces and Working Groups is available on the caBIG website at http://caBIG.nci.nih.gov.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
→ Workspaces
→ Strategic Working Groups
Measuring progress
Impact
Getting involved
More information

A closer look – caBIG Workspaces and Working Groups

The activities of the caBIG community are undertaken within Workspaces and Working Groups. Workspaces are areas or virtual environments where caBIG project activities are grouped. Working Groups support and guide Workspace activities – and in some cases the activities of caBIG as a whole.

This section of the caBIG presentation provides an overview of the activities of the caBIG Workspaces, their associated Working Groups, and the Strategic Level Working Groups. Select the areas you are interested in knowing more about from the items in the panel on the right side of your screen.

More detailed information is available on the caBIG website.

A closer look – caBIG Workspaces and Working Groups

Clinical Trial Management Systems Workspace (and Working Group)

- The Clinical Trial Management Systems Workspace will address the cancer research community need for consistent, open and comprehensive tools for clinical trials management. These systems will be assembled whenever possible out of existing caBIG-compatible systems and software from a variety of sources, ensuring that maximum leverage will be gained from existing infrastructure.

- Potential Workspace projects may include the adoption of caBIG compliant systems for clinical trials data collection and management as well as the evaluation and testing of new systems currently under development. The Workspace may also develop and test interoperable modules focused on adverse event monitoring and reporting, patient recruitment and retention, chemotherapy and patient management, collection and data management of quality-of-life information, study protocol design, monitoring and reporting on ongoing studies and IRB management.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
  Workspaces
    Clinical Trial Management Systems
    Integrative Cancer Research
    Tissue Banks and Pathology Tools
    Vocabularies and Common Data Elements
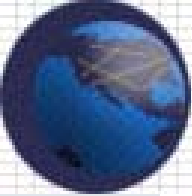   Architecture
  Strategic Working Groups
Measuring progress
Impact
Getting involved
More information

A closer look – caBIG Workspaces and Working Groups

Integrative Cancer Research Workspace (and Working Group)

- The Integrative Cancer Research Workspace will provide tools and systems to enable integration and sharing of information among cancer researchers. These tools will facilitate the integration of data not only from different Centers but also data of different types. This will enable translational and integrative cancer research by providing for the integration of clinical and basic research information between "bench and bedside" as well as from "bench to bench."

- Tools in this Workspace will cover a wide range of topics, from transcription profiling and proteomics to translational biology and clinical integration.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
  Workspaces
    Clinical Trial Management Systems
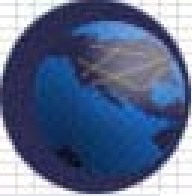   **Integrative Cancer Research**
    Tissue Banks and Pathology Tools
    Vocabularies and Common Data Elements
    Architecture
  Strategic Working Groups
Measuring progress
Impact
Getting involved
More information

caBIG cancer Biomedical Informatics Grid   http://caBIG.nci.nih.gov   ◀ Back | Pause | Next ▶

34

A closer look – caBIG Workspaces and Working Groups

Tissue Banks and Pathology Tools Workspace (and Working Group)

- The Tissue Banks and Pathology Tools Workspace will provide for the development, and implementation of tissue and pathology tools. These systems will facilitate integration and provide access to information from geographically-separate locations.

- Researchers will have unprecedented access to tissue and pathology resources, for the first time using a single point of access.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
  Workspaces
    Clinical Trial Management Systems
    Integrative Cancer Research
    Tissue Banks and Pathology Tools
    Vocabularies and Common Data Elements
    Architecture
  Strategic Working Groups
Measuring progress
Impact
Getting involved
More information

A closer look – caBIG Workspaces and Working Groups

Vocabularies and Common Data Elements Workspace (and Working Group)

- The Vocabularies and Common Data Elements Cross Cutting Workspace will be responsible for evaluating and integrating systems for vocabulary and ontology content development, as well as software systems for content delivery. They will develop standards for the representation of ontologies and vocabularies used throughout the caBIG system, as well as assessments of existing systems proposed for use within caBIG. Workspace participants will also be responsible for vocabulary and ontology content development, when specific and required content does not exist in a form usable by caBIG.

- By strongly integrating standard vocabularies and data elements at the heart of caBIG projects, cancer researchers can search for and analyze large amounts of different data.

A closer look – caBIG Workspaces and Working Groups

Architecture Workspace (and Working Group)

- The Architecture Workspace will assist in bringing new architectural developments and standards to caBIG, will act as an interface to Information Technology communities developing novel architectures, and will provide architectural expertise and solutions to the other Workspaces.

- With members of the cancer research community providing direct input into the current and future caBIG infrastructure, the entire underlying infrastructure can stay both current and relevant as projects develop.

caBIG defined
Challenge
Beneficiaries
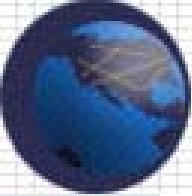Participants so far
Facts and activities
A closer look
Workspaces
Clinical Trial Management Systems
Integrative Cancer Research
Tissue Banks and Pathology Tools
Vocabularies and Common Data Elements
Architecture
Strategic Working Groups
Measuring progress
Impact
Getting involved
More information

A closer look – caBIG Workspaces and Working Groups

Data Sharing and Intellectual Capital Working Group

This Working Group will address strategic issues related to data sharing and intellectual capital associated with caBIG and develop recommendations to the NCI and caBIG oversight groups. They will also provide expert guidance regarding specific areas of concern raised within caBIG Workspaces and individual project teams associated with these issues.

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities

A closer look

Workspaces

Strategic Working Groups
└ **Data Sharing and Intellectual Capital Working Group**

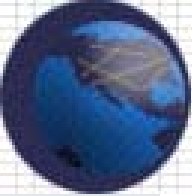Strategic Planning Working Group

Training Working Group

Measuring progress

Impact

Getting involved

More information

38

A closer look – caBIG Workspaces and Working Groups

Strategic Planning Working Group

This Working Group will assist the NCI and caBIG oversight groups with caBIG strategic planning and vision development activities. Participants will provide strategic insights regarding caBIG's potential role, relationship and interface with other initiatives.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
Workspaces
Strategic Working Groups
Data Sharing and Intellectual Capital Working Group
Strategic Planning Working Group
Training Working Group
Measuring progress
Impact
Getting involved
More information

A closer look – caBIG Workspaces and Working Groups

Training Working Group

This Working Group will help define the framework and standards against which individual Workspaces and Project Groups can develop and communicate about tools and solutions. This will include creating frameworks for online or interactive training, developing templates and skeleton documents for technical manuals, and specifying means for cooperating groups within the Workspaces to collaborate.

caBIG defined

Challenge

Beneficiaries

Participants so far

Facts and activities

A closer look

Workspaces

Strategic Working Groups

Data Sharing and Intellectual Capital Working Group

Strategic Planning Working Group

Training Working Group

Measuring progress

Impact

Getting involved

More information

http://caBIG.nci.nih.gov

◄ Back | Pause | Next ►

40

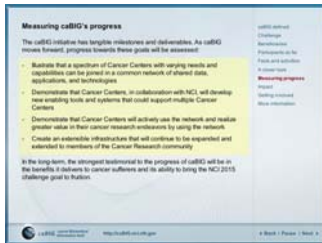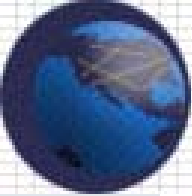## Measuring caBIG's progress

The caBIG initiative has tangible milestones and deliverables. As caBIG moves forward, progress towards these goals will be assessed:

- Illustrate that a spectrum of Cancer Centers with varying needs and capabilities can be joined in a common network of shared data, applications, and technologies

- Demonstrate that Cancer Centers, in collaboration with NCI, will develop new enabling tools and systems that could support multiple Cancer Centers

- Demonstrate that Cancer Centers will actively use the network and realize greater value in their cancer research endeavors by using the network

- Create an extensible infrastructure that will continue to be expanded and extended to members of the Cancer Research community

In the long-term, the strongest testimonial to the progress of caBIG will be in the benefits it delivers to cancer sufferers and its ability to bring the NCI 2015 challenge goal to fruition.

caBIG defined
Challenge
Beneficiaries
Participants so far
Facts and activities
A closer look
Measuring progress
Impact
Getting involved
More information

caBIG *cancer Biomedical Informatics Grid*   http://caBIG.nci.nih.gov

◀ Back | Pause | Next ▶

41

Measuring caBIG's progress

The caBIG initiative has tangible milestones and deliverables. As caBIG moves forward, progress towards these goals will be assessed. Processes have been established as part of caBIG's structure to actively monitor its progress and ensure that the caBIG goals are being met.

The enthusiasm and interest of the cancer center community also influences the progress of the caBIG pilot. To date, there has been tremendous interest about caBIG from the cancer center community. An impressive array of tools and data sets were put forward by the Cancer Centers as project activities for caBIG. And Centers embraced the open development and open access philosophy of caBIG. The National Cancer Institute is excited about the level of interest and the willingness of the Cancer Centers to coordinate their activities to capitalize on mutual strengths and address the challenges posed by the lack of a unifying informatics infrastructure.

In the long term, the strongest testimonial to the progress of caBIG will be in the benefits it delivers to cancer sufferers and its ability to bring the National Cancer Institute 2015 challenge goal to fruition.
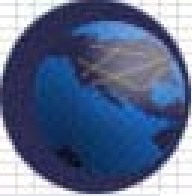
Impact of caBIG – How does it affect me?

Any interested individual or group is able to access the tools and data that have been developed or shared by the caBIG community. In fact - an inventory of caBIG infrastructure, applications and datasets is already available on the caBIG website. It is anticipated that this inventory will grow rapidly as the pilot project activities add their contributions.

caBIG tools will be based on real-world needs, will be developed according to a common set of standards, and will be extensively tested and used. They will also harness the strengths of NCI's existing bioinformatics infrastructure – caCORE.

Access to caBIG will provide cancer researchers and other interested groups with the resources to enable them to focus their attentions on solving new problems, rather than redeveloping basic infrastructure to support their activities. It will also reduce the barriers to collaborating with a wide network of researchers.

Anyone can choose to contribute to the diverse activities of the grid and voluntarily participate as a member of the caBIG group. These types of contributions will further the development of the shared caBIG platform. And they will help sustain the complex, interconnected tapestry of groups and individuals supporting the caBIG effort.

Impact of caBIG – Do I need to change what I am doing now?

In short – NO – the establishment of caBIG does not mean you need to change what you are doing now. Participation in caBIG is voluntary. And – the caBIG community recognizes that the success of caBIG is dependent on individual innovation and diversity.

The caBIG community encourages anyone who is interested in caBIG activities to capitalize on the resources and infrastructure available on the network as it suits their needs. And to consider integrating their tools and data where they see value.

Resources and tools will be provided by the caBIG community to help others participate in caBIG and to assist them with understanding caBIG's common standards and open-source principles.

Getting involved with caBIG

Get involved with caBIG right now:

- Track activities on the caBIG website http://caBIG.nci.nih.gov.

- Attend open caBIG meetings and open Working Groups. Watch the caBIG website for information on these types of opportunities

- Learn more about NCI's existing bioinformatics infrastructure (caCORE). Further information is available at http://ncicb.nci.nih.gov/core.

- Download and get familiar with the tools and applications already available on the caBIG website. The current inventory of infrastructure, applications, and datasets used to support the caBIG initiative can be accessed at http://caBIG.nci.nih.gov/inventory.

- Consider how you could integrate your tools and databases into the caBIG community

As the caBIG community grows, the inventory of infrastructure, tools and data will expand and more resources will be available to facilitate participation in caBIG.

caBIG defined
Challenge
Beneficiaries
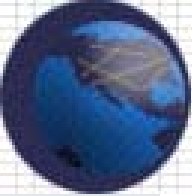Participants so far
Facts and activities
A closer look
Measuring progress
Impact
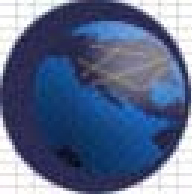**Getting involved**
More information

Getting involved with caBIG

There are many ways that you can get involved with caBIG right now:

- Track caBIG activities and progress on the National Cancer Institute's caBIG website.

- Attend open caBIG meetings and open Working Groups to contribute ideas and to better understand caBIG activities. Watch the caBIG website for information on these types of opportunities.

- Learn more about the National Cancer Institute's existing bioinformatics infrastructure – caCORE - as caBIG will harness the strengths of this platform and activities will be undertaken in a complementary way. Further information is available at the National Cancer Institute Center for Bioinformatics website.

- Download and get familiar with the tools and applications already available on the caBIG website. This is only the beginning, and this list will start to grow rapidly over the next few months as more informatics applications become interoperable and available to share. The current inventory of infrastructure, applications, and datasets used to support the caBIG initiative can be accessed at the caBIG website. This inventory includes key infrastructure and applications from the National Cancer Institute Center for Bioinformatics.

- Start to think about how you could integrate the tools and databases you are working on into the caBIG community.

As the caBIG community continues to grow, additional infrastructure, tools and data will be made available. Furthermore, resources and informational tools will be provided by the caBIG community and the National Cancer Institute to assist those who want to use or contribute to the network. These will include training resources, support for use and adoption of tools, informational Workshops, and tools to facilitate broader use of caBIG by interested organizations.
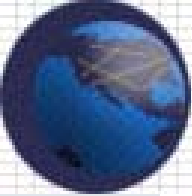
More information on caBIG

Please go the caBIG website for additional information on the caBIG initiative.

Watch the website for new information as the caBIG pilot evolves.

If you have any questions – please email the National Cancer Institute at the caBIG information address shown on the screen.