

Leveraging caBIG[®] - New Collaborative Models in Science and Business

Bio-IT World April 13, 2011





Open Source Audience Pulse

**Life Science Informatics
Solutions
(caBIG®, i2b2)**

**General Applications
(Firefox, SugarCRM)**

**Web Infrastructure (JBoss,
Tomcat, Apache)**

**Persistence
(MySQL, PostgreSQL)**

**Operating System
(Linux)**



Where we see caBIG[®] principles advancing business

■ Open Access

- + caBIG perspective begins with this end in mind – the data in a system is more valuable when available to other systems

■ Open Source

- + Most business friendly source licensing encouraging choice – modify, wholesale not just the code but all the artifacts

■ Open Development

- + caBIG[®] follows this to a tee - latest code always available, no login, free of charge, via anonymous checkout

■ Federation

- + Data is intended to be combined from multiple sources, supporting the ability to deal with issues like provenance, security and interface design



Where we employ caBIG[®] and Open Source

- **Ivy Genomics Based Medicine**
- **In Silico Research Center of Excellence**
- **GWAS Solution Example**
- **Biocator**



- **Last year Dr. Michael Berens of TGen spoke about the Ivy Genomics Based Medicine Project**



- + We built a light web app to coordinate the 9 vivariums, the central pharmacy, basic reporting and analysis and sample tracking
- + Orchestrated the workflow to directly share the xenograft annotation and molecular data with caArray using EBI's mage-tab
- + Software costs: 6.6% - value was the focus, get it done was the cause

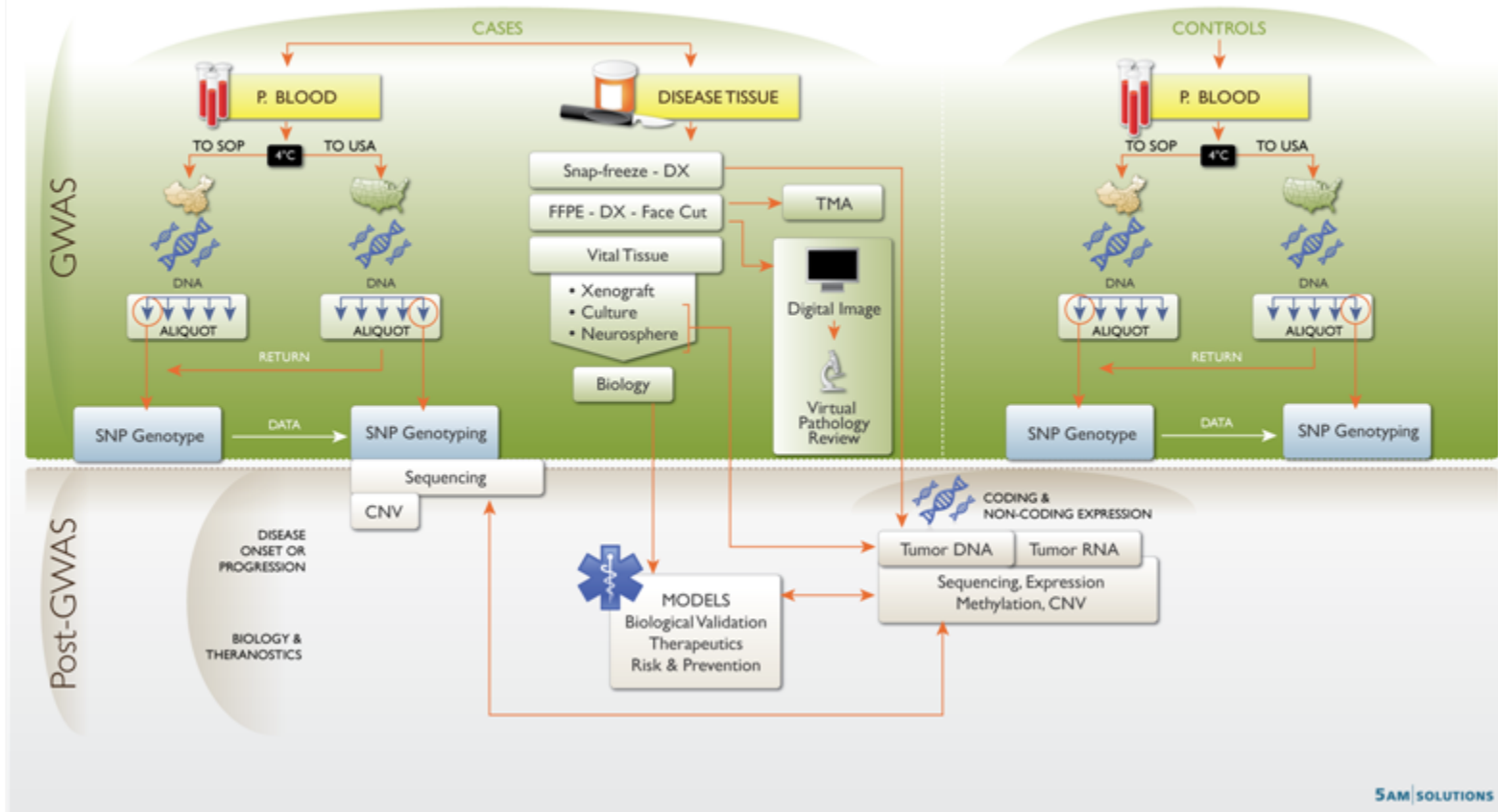


- **Building upon data organized by the Ivy Study – we moved to support Insilico based discovery**
 - + Compare xenograft genomic profiles with TCGA Expression and Copy Number Data Sets
 - + Beginning to compare methylation and microRNA
 - + Use those results to guide treatment selection for new GBM patients in the most precise way possible using the test bed of xenograft data
- **Added a significant component –**
 - + caBIO – convenient aggregation of genomic annotation and functional annotation



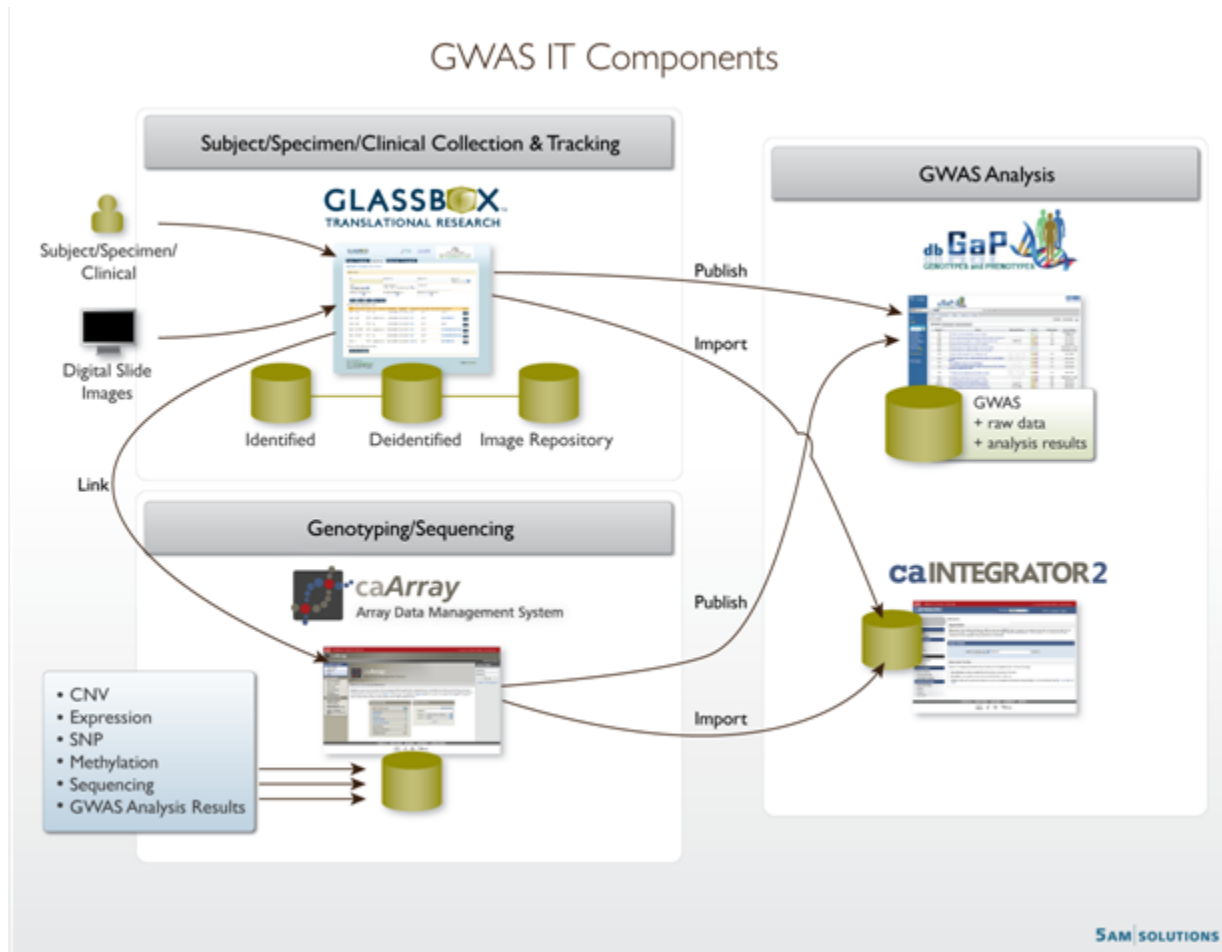
When designing a big science initiative

Genome-Wide Association Studies (GWAS)



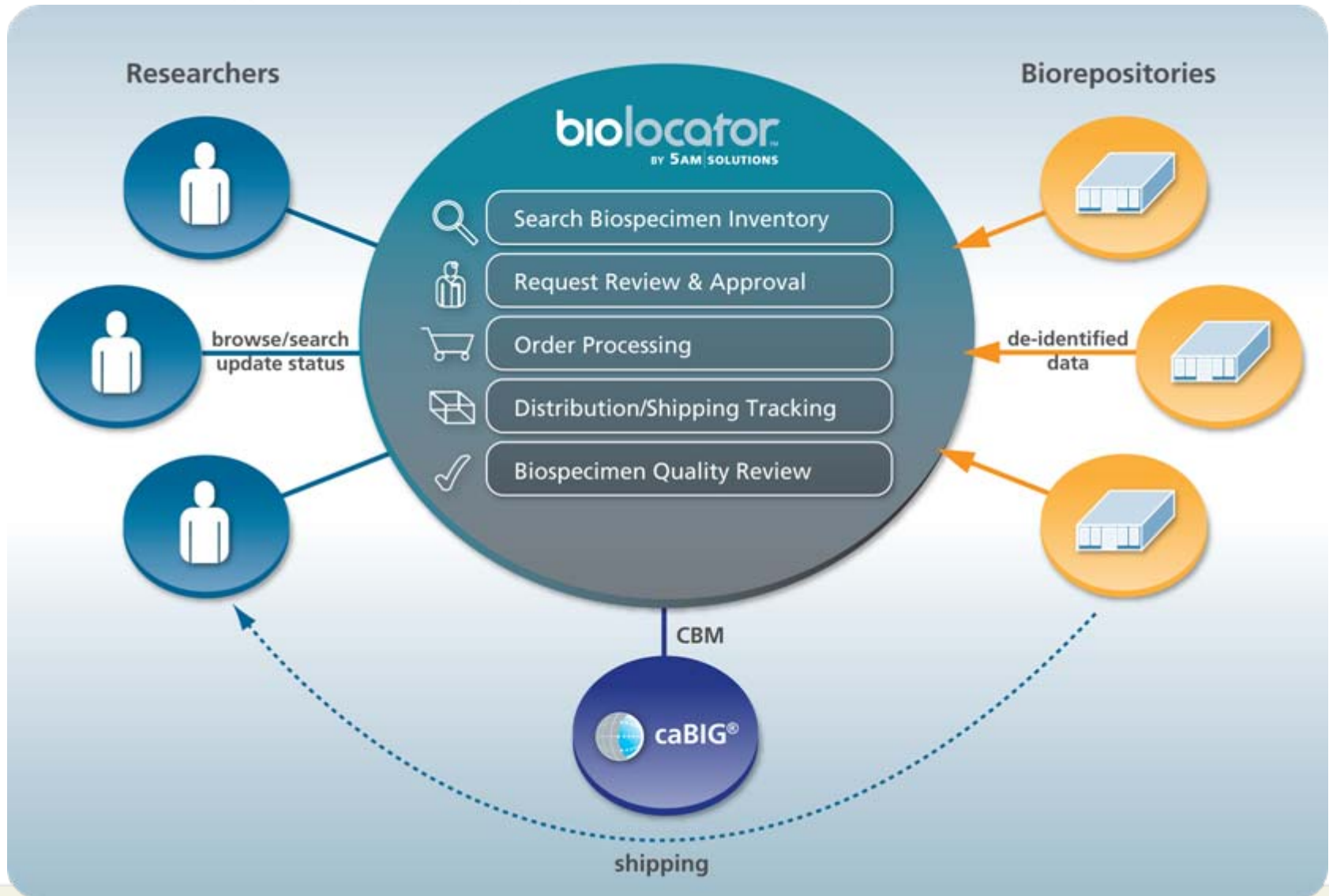


We could create a reliable solution (which scored well)





Meeting Novel Requirements





Employed multiple times with reciprocal value

The image displays three overlapping screenshots of web portals related to biospecimen research. The top screenshot shows the National Foundation for Cancer Research (NFCR) Tissue Bank Consortium in Asia (TBCA) website. The middle screenshot shows the NBSTRN Dried Blood Spot Virtual Repository website. The bottom screenshot shows the Bioloicator website by SAM SOLUTIONS, which features a search bar, a sign-in form, and a list of diseases and tissue types.

Bioloicator by SAM SOLUTIONS

Find & request biospecimens for qualified research projects.

Learn More Register

Sign In
Email Address
Password
Sign In
Forgot password? Register
Remember me

Browse By Type

- Tissue (12243)
- Fluid (832)
- Cells (986)
- Molecular (9734)

Browse By Disease

- Actinic Keratosis (37)
- Active Colitis (26)
- Acute Pancreatitis (27)
- Adenoma(s) (1724)
- Atypical Adenomatous Hyperplasia (134)
- Carcinoma of Breast (1068)
- Chronic Pancreatitis (964)

Welcome

Have you ever needed access to high quality biospecimens to use in research? The Bioloicator links disparate biobanks and provides a centralized, de-identified view of biospecimens, allowing researchers to browse and query for biospecimens. For facilities, the bioloicator provides the ability to review and manage biospecimen requests, configure approved orders, track shipments, and view researcher responses to the biospecimens they have received.

Learn More Register Now

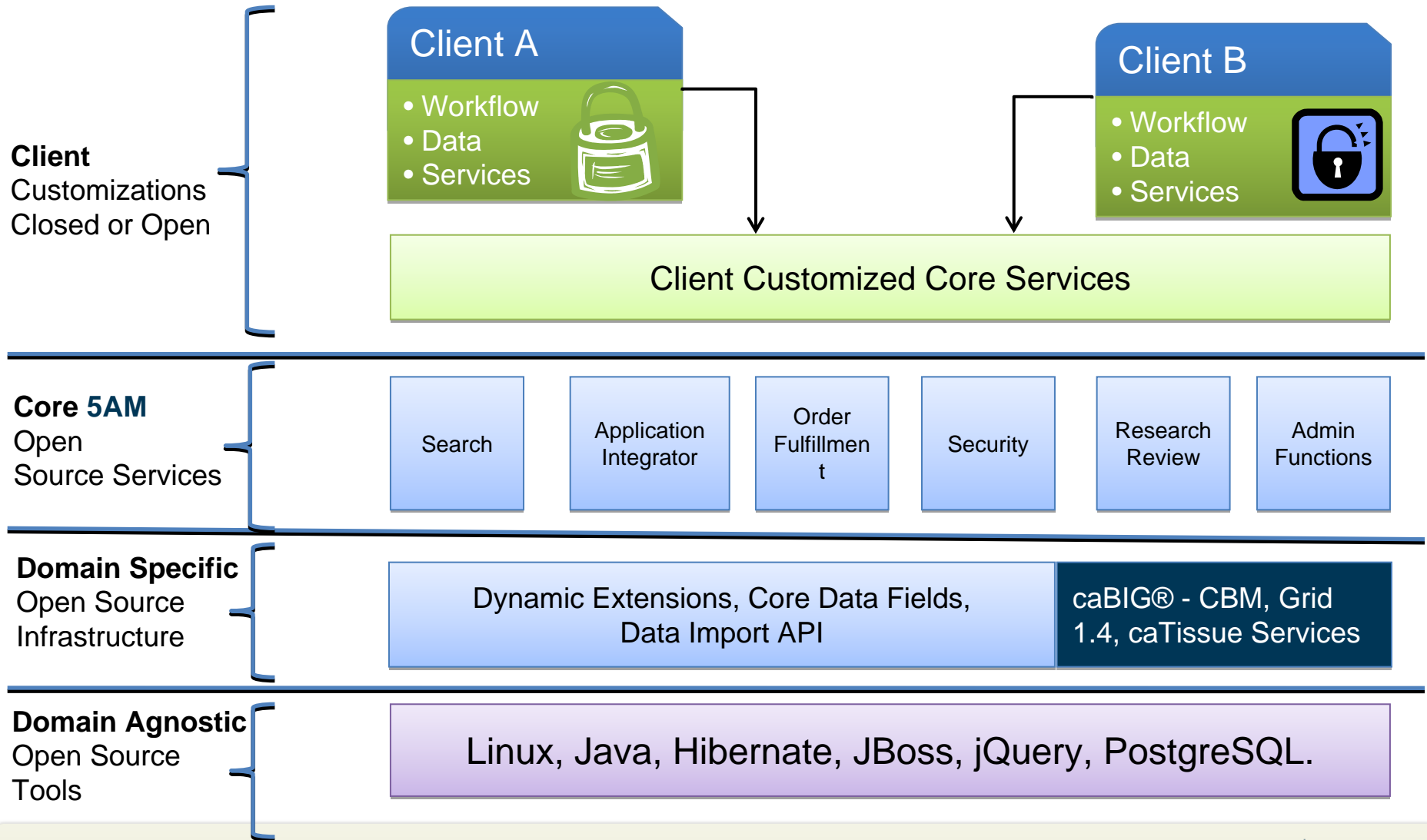
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Site by SAM SOLUTIONS



Under the hood: caBIG[®] empowers new models





Thank you

- **Brent Gendleman**
 - + bgendleman@5amsolutions.com
- **5AM BioIT World 2011 –**
 - + <http://www.5amsolutions.com/bioit>