

# **GLOBE Tech Refresh**

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# Agenda

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- Findings of January 2011 report
- Goals of 1 year tech refresh project
- Demonstration of early prototype
- Refactoring the GLOBE Scientific Database
- Data input modernization
- Demonstration of visualization prototypes

# **BACKGROUND - ANALYSIS**

## January 2011 – Issues/Focus Areas

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- Two Sites
- User Management
- Scientific Data Input
- Data access/Visualization
- Collaboration
- Recognition/Awards
- IT Administration/Help
- Web CMS
- Reporting Capabilities
- IT Infrastructure

## January 2011 – Issues/Focus Areas

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GLOBE is hampered by old technology and tools

The ability to undertake and complete new initiatives is limited due to the constraints of these tools and the manpower it takes to support them

# HIGH LEVEL GOALS

# Goal 1

## Motivate Core Users to Engage

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- Create a myGLOBE page for teachers and partners.
  - Allows for some forms of customized content control
- Display visually exciting and/or timely examples of student projects being carried out using GLOBE data.
- Show engaging examples of how teachers from all over the world can incorporate GLOBE in the classroom
- Create and distribute regular features of teachers and students
- Modernize the teacher guide to provide training modules on every protocol
- Provide multi-language support
- Develop a comprehensive, visible awards system

*Additional enhancements in other areas will further this goal*

## **Goal 2**

### **Create Sense of Community/Collaboration**

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- Define the goals of community - Define the appropriate and best value places to create and support communities
  - Bring tools to support community needs
- Provide a collaboration search tool to allow teachers to find and interact with schools and other teachers with common interests
- Offer ways for scientists to interact with teachers and students.
- Provide tools that would allow Partners and Trainers to conduct distance learning teacher training modules.
- Support opportunities(a role) for Alumni to participate
- Support targeted communication



# Goals 3

## User Friendly Site

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- Redesign the site to integrate Classic and New
  - Easy to use, more intuitive, engaging, and effectively meets the needs of the core users.
- Review and validate the information architecture key content and functions are quickly and easily available
  - Don't overwhelm the user with too much information at once
- Pre-populate form fields whenever possible
- Provide effective visual tools to support step-by-step instructions
- Simplify data entry and include helpful user support
- Support alternative methods for viewing, entering and interacting with information
  - Mobile, iPads, other devices
  - Low Bandwidth options for users with limited bandwidth or technology

# Goal 4

## Data Inputs

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- Login needs to be simple and easy – with one integrated login option for all capabilities
- Site set-up needs to be simple and logical, with instructions where necessary.
- Data entry itself needs to be simple and logical, without the need to scroll up or down pages to see what you need.
- Provide visual clues/icons – less text heavy
- Include simple step-by-step guides (with pop-up help boxes where needed) to remind users how to do it. Keep it simple.

# Goal 5

## User Management

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- Support teacher and school ID independence
- Support Lead Partner/Service Area Coordinator account capabilities to manage Service Area functions
  - School/Teacher support - site set-up or other issues
- Integrate various user based functions (workflow) - workshops/training/teacher accounts and schools
- Verify roles and functions structure and ensure all identified roles have useful/valid functionality

# Goal 6

## Improve CMS

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- Support ability for GPO to easily modify all site content
- Greater fidelity to support content publishing across the GLOBE hierarchy
  - May require separate roles for creating, editing and publishing content
- Ability for GPO managers, regional directors and others as appropriate to manage users and administer content sections
- Editorial workflow support (page versioning)
- Single sign-on capability with other GLOBE applications
- Support and encourage users at various levels in the GLOBE hierarchy to promote themselves and their work
- Provide multilingual support

# Goal 7

## Overhaul Infrastructure

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- Overhaul the backend, database system – so it's easy to maintain and scalable.
- Create a system (hardware/software) that is stable and predictable
- Create a training server that is dependable
- Ensure the system architecture is up to best practices standards
- Create an easier way to complete data mining for metrics reporting
- Migrate to updated hosting environment

# Goal 8

## Overhaul Data Access/Visualization

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- Update the data access systems so it's easy to use and uses the most up-to-date technologies
- Simplify the visualization tools for younger students by providing age appropriate options
- Data should be searchable based on a range of potential project needs

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**1 YEAR PLAN**

# Approach

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## ■ Phase 1 – CMS

- Implement new CMS, workflow, workshop management
- Migrate content from classic and new into one website
- Implement a more robust user management capability
- Support multilingual content publishing throughout the GLOBE hierarchy

## ■ Phase 2 – Database

- Modify database and data input scripts.
- Remove everything in the database that isn't directly related to science data input (metrics, awards etc)
- Add Teacher ID to directly relate teachers to their data
- Re-skin data input forms for better look and feel
- Validate need for all 56 protocols?

\*Assumption – science data input, storage and manipulation is working



## Approach Phases(cont)

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- Phase 3 – Visualization
  - Modify database to provide common I/F to visualization tools
  - Implement an improved visualization capability
- Phase 4 – Collaboration
  - Implement GLOBE communities and collaboration
- Phase 5 – Metrics and Reporting
  - Redo Metrics and Reporting capabilities to provide better statistics and the ability to slice and dice data by time and user/role
- Phase 6 – Awards and Honors
  - Redo Awards and Honors. Simplify. Support additional awards or recognition beyond just data input (such as community contributions)

## Two Planned Deliveries

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- November 2011 – Phase 1,2 and 4
  - New Production Environment
  - Classic and New site combined into 1 site
  - Collaboration
  - Better Data Input Screens
  - New User Management
  - New workflow, workshop support
  - Multilingual support
- April 2011 – Phase 3, 5, 6 (Visualization, Reporting, Metrics and Awards)
  - New Visualization
  - New Reporting and Metrics
  - New Award/Honor role support

## Current Status

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- Sitemap Approved
- Site Wireframed and approved
- New Hardware identified and being purchased
- New graphical designs in progress
- Collaboration prototype built
- New User and Organization management capability in progress
- New Workshop module in progress
- New CMS in progress
- Teacher IDs being added to science database

# DEMONSTRATION

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# **DATABASE AND DATA INPUT MODERNIZATION AND VISUALIZATION PROTOTYPES**