162.   KBase Outreach and Partnership

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http://kbase.us

Project Goals: The KBase project aims to provide the capabilities needed to address the grand challenge of systems biology: to predict and ultimately design biological function. KBase enables users to collaboratively integrate the array of heterogeneous datasets, analysis tools and workflows needed to achieve a predictive understanding of biological systems. It incorporates functional genomic and metagenomic data for thousands of organisms, and diverse tools for (meta)genomic assembly, annotation, network inference and modeling, allowing researchers to combine diverse lines of evidence to create increasingly accurate models of the physiology and community dynamics of microbes and plants. KBase will soon allow models to be compared to observations and dynamically revised. A new prototype Narrative interface lets users create a reproducible record of the data, computational steps and thought process leading from hypothesis to result in the form of interactive publications.

Outreach goals derive from the main KBase objective of building a community-driven computational system for systems biology research. Our ultimate goal is to engage a diverse user community and maximize successful use of KBase to advance predictive biology. To accomplish this requires developing relationships and understanding researchers, their scientific objectives, and how KBase could benefit their research. Since KBase is a community-driven project, feedback from users or potential users is very important as we aim to drive KBase development to meet their needs. This includes improvements to KBase system capabilities, workflows, documentation and training. In part Outreach acts as the user advocate to the KBase development team, ensuring the development team is aware of the research user community's needs, priorities and perspective on KBase. Outreach is also responsible for effectively communicating KBase utilities and benefits to researchers and training them to be high performing KBase

users and contributors. Success for the KBase project ultimately depends on learning from the user community and determining how best to reach, inform, and respond to their needs and priorities so we can help them deliver successful, high-quality science.

Engagement is accomplished via a variety of mechanisms and venues. We are making personal contact with DOE-BER funded researchers (and over time expanding our scope to universities, other agencies and industry) to talk one-on-one to learn about their research and needs. Detailed information about our community enables us to provide tailored outreach**.** Outreach based on the type of KBase user, research area and scientific questions help us to more productively communicate with users and effectively engage them in KBase events.

Outreach produces webinars and holds tutorials and developer boot camps to provide education on the use of KBase and how to contribute. To accompany such efforts and to promote independent learning, we will develop education materials to assist users in navigating and using KBase effectively. Outreach attends relevant conferences and meetings to present KBase, provide training, and engage in scientific discussions with the community. We inform the community of new developments and outreach events through the website (kbase.us), blogs and social media.

In addition, the KBase team is building partnering relationships with other large projects. For important stakeholders--such as JGI, the BRCS, EMSL and iPlant--we have been co- designing science and software milestones, sharing infrastructure, defining routes for users to migrate between software and data systems, and developing cross-training programs. This allows KBase to maximize impact and relevance to the community and to prioritize its development goals.