Governance Subcommittee, May 3, 2011

Update on CIRM's Grants Management System

This report is an update of CIRM's progress toward building a custom grants management system (GMS) that can be used to track CIRM's grants from inception through close out ("cradle-to-grave"). The two figures below were presented to the ICOC last August and summarize the goals of this project. Figure 1 illustrates workflow steps in the current GMS with the stars representing steps that require manual transfers of data. Figure 2 illustrates the workflow steps for the GMS under construction.

Figure 1 – Current GMS workflow

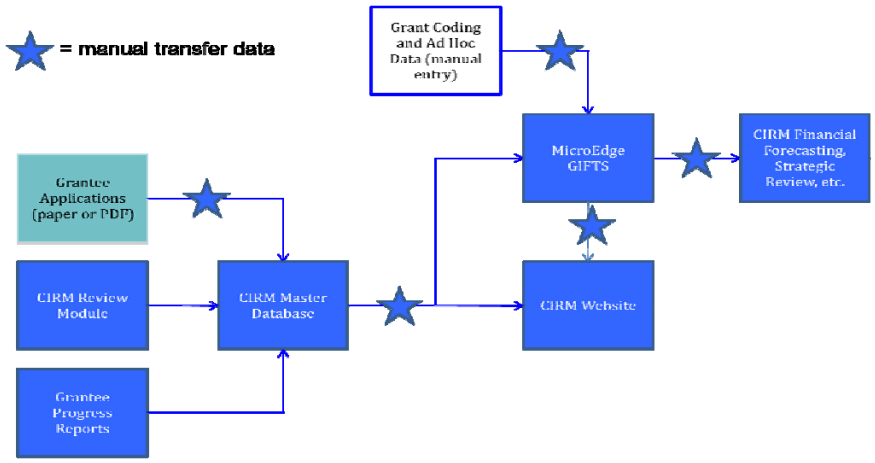
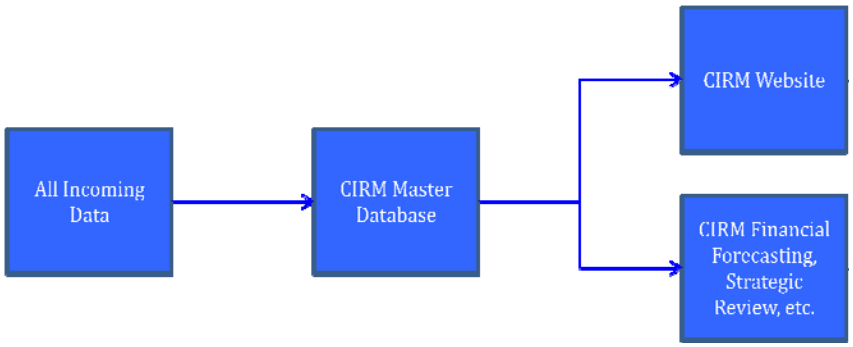


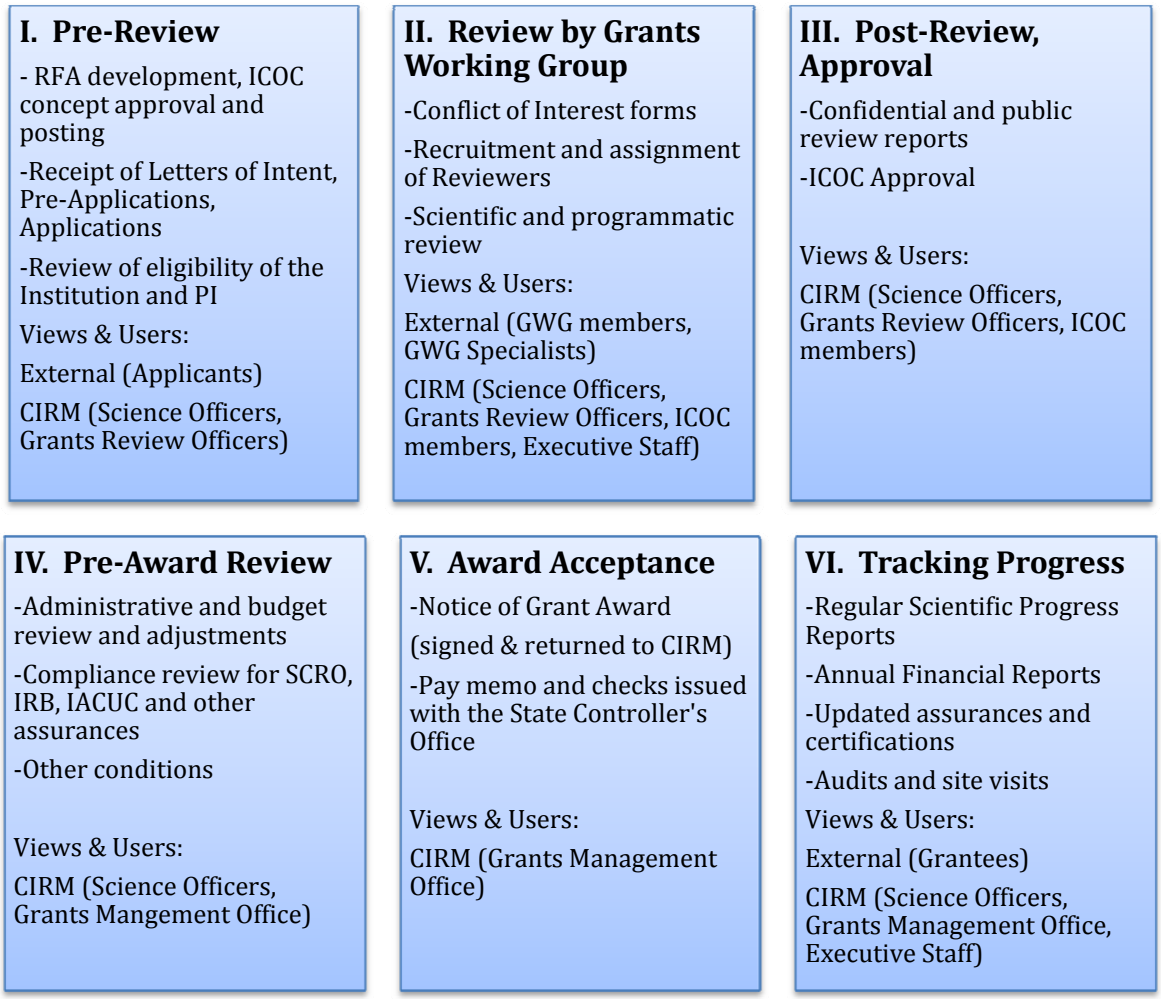
Figure 2 – Workflow in the new GMS



When complete this grants management system will make it possible to

- Collect all data in a single master database;
- Eliminate the need for CIRM staff members to enter data by hand (saving time; increasing accuracy);
- Automatically update the website;
- Gain easy access to information for financial forecasting, measuring progress, analyzing CIRM's portfolio and strategic planning.

As we have described in previous reports, grants management is a complex, far-reaching activity that involves people, software and equipment. An overview of the steps involved in the life of a grant program at CIRM is summarized in the figure below.



Many of the steps in this process must be completed outside the GMS (e.g. development of the RFA, ICOC approval) but those that are appropriate are being incorporated into the new system. The approach has been to build the GMS iteratively as a series of modules and release them on an on-going basis as soon as they are ready.

To ensure successful outcome of our internal software development efforts we contracted with an IT Advisor with considerable experience as a software engineer and architect. He has implemented many industry best practices to help control the scope of the systems produced and ensure that they will be correct and maintainable in the future. We are using a small but highly skilled set of developers, with tightly controlled delivery timelines, who regularly interact with the internal science office users, as well as external users, of our systems. This transparency helps keep the development efforts on track to meet the needs of the users without over-engineering the system, a trend when technologists work in isolation. Further, we are using common open source languages and toolsets in our

internal development, which will help maximize the ease of maintaining and supporting these systems in the future.

During the past year, the focus has been on components related to "I. Pre-Review" process and "VI. Tracking Progress" (post-award). These are the two areas where CIRM's applicants and grantees input data to CIRM. Several modules have been completed in a web-based format that allows for automated transfer of data to/from the core database. Not only do these modules make data collection and analysis easier and faster, they have also streamlined data submission by CIRM's applicants and grantees, who have been very positive about these new features. Once each module becomes available it is being applied to all subsequent RFAs.

Pre-Review - All aspects of the Pre-Review grant submission process are being incorporated into the new system. Thus far we have released individual modules for the least complicated versions of Letters of Intent, Pre-Applications and Applications. Collectively, this represents a major advance for CIRM's GMS and our intent is to further refine and develop these modules for more complex RFAs (e.g. with co-PIs, co-funding partners, activity based budgets) as they are released over the next year. Thus, from this point forward all incoming data related to new RFAs will be automatically collected into a master database without requiring manual entry by members of CIRM's staff. This will save time, improve accuracy and boost efficiency at many levels of the grant-making process.

Tracking Progress – Many requirements for post-award reporting have also been incorporated into the new system, including annual progress reports, updates of assurances and certifications and publication disclosures. Required disclosures related to cell lines and inventions will soon be added.

During the remainder of 2011 and into 2012 we will integrate the new database with our existing post-award database and incorporate information from all of CIRM's early RFAs. This will greatly increase our ability to analyze CIRM's full portfolio. We will also begin to integrate CIRM's public website with this database, so that public information can be updated automatically and in a timely manner.

It is also important to note that this new GMS is also having an impact at many other stages of the grant making process. For example, data in the system is being used to construct conflict of interest lists and an online form is being developed. The system is also being used to store information about the review process (GWG assignments and reviews), and in the future it will incorporate the Pre-Application Review process and the Notice of Grant Award.

Building a system flexible and comprehensive enough to meet CIRM's needs is a major endeavor that will produce significant benefits. In the past year an effective and efficient team has been assembled to meet this challenge. This group has made significant progress with more releases scheduled in the coming months.