

# COMPUTING DIVISION BEST PRACTICES IDENTIFIED DURING AS-IS STATUS REPORT

**Report Date:** 5/29/2009

**QAR/QAE:** Bakul Banerjee/Robert Wilson/Larry Lamm/Kurt Mohr

**Fermilab Division/Section Name:** Computing Division (CD)

Two CD best practices were identified during the as-is assessment.

1. **Work planning and financial management:** The integrated methodology of work planning and financial management practiced at CD is working well for the division as well as for its customers. To fulfill the division's mission, CD must adjust to the constantly changing requirements for the Laboratory's computing infrastructure and scientific support. Like other organizations, uncertainties of the funding level and availability dates complicate the matter further. For better management, CD has established the process of developing Strategic Plans and associated Tactical Plans that are tied to the Budget Input process and eventually to the Laboratory's Project Accounting system. Throughout the assessment, most process owners referred to their Tactical Plans as their preferred planning instruments. Tactical plans are modified and reviewed actively making them live documents. CD internal software tools are effectively used to manage the entire process.
2. **Implementation of Information Technology Service Management (ITSM) framework:** CD has embraced the internationally recognized IT management framework. With the help of external consultants, CD work groups are working on implementing the first phase of the framework. The final goal is to implement the full ITSM framework for the Laboratory concluding the effort by applying for the ISO 20000 certification. During the assessment, two ITSM processes, Incident Management and Service Catalog Development were assessed. Both processes proved to satisfy all applicable IQA criteria. As proven in the commercial industries, CD ITSM process implementation is likely to save the Laboratory significant amount of money.

## **Non-consensus Issues & Status:**

None to date.

The rest of this report gives further details on this assessment.

## COMPUTING DIVISION BEST PRACTICES IDENTIFIED DURING AS-IS STATUS REPORT

### Assessments Status

| Process Assessed                                                          | Department                                      | % Complete |
|---------------------------------------------------------------------------|-------------------------------------------------|------------|
| <b>Division Administration, Management, and Program Support Functions</b> |                                                 |            |
| ES&H Process                                                              | Computing Division Office                       | 100%       |
| Facilities Management                                                     | Computing Division Office                       | 100%       |
| Financial Management                                                      | Computing Division Office/ Financial Management | 100%       |
| Management                                                                | Computing Division Office                       | 100%       |
| <b>IT Infrastructure for both Scientific and Administrative Functions</b> |                                                 |            |
| Cyber Security                                                            | Computer Security                               | 100%       |
| Linux/Mac support                                                         | Central Services & Infrastructure               | 100%       |
| Networking                                                                | Core Networking & Computer Security             | 100%       |
| <b>Scientific Tools, Services and Facilities development and support</b>  |                                                 |            |
| Electronic Engineering                                                    | Electronic Systems Engineering                  | 100%       |
| Machine Deployment                                                        | CMS Computing Facilities                        | 100%       |
| Data Management                                                           | CMS Computing Facilities                        | 100%       |
| <b>Scientific Program Operations</b>                                      | Facility Experiments Facilities                 | 100%       |
| <b>Scientific Research</b>                                                | Running Experiments                             | 100%       |
| <b>Cross Cutting Activities</b>                                           |                                                 |            |
| Incident Management                                                       | Central Services & Infrastructure               | 100%       |
| Service Catalog                                                           | Project Management & QA                         | 100%       |
| <b>Item Control including S/CI</b>                                        | Central Services & Infrastructure               | 100%       |

## COMPUTING DIVISION BEST PRACTICES IDENTIFIED DURING AS-IS STATUS REPORT

### Criteria Assessed and Results for Each Process

| Process Name<br>Criteria              | #12 ES&H<br>Process | #32 Facilities<br>Management | #36 Financial<br>Management | #31 Management | #47 Cyber<br>Security | #91 Linux/ Mac<br>Support | #68 Networking | #48 Electronic<br>Engineering | #67 Machine<br>Deployment | #76 Incident<br>Management | #77 Service<br>Catalog | #87 Scientific<br>Programs<br>Operation | #97 Scientific<br>Research | #98 Data<br>Management | #66 Item Control |
|---------------------------------------|---------------------|------------------------------|-----------------------------|----------------|-----------------------|---------------------------|----------------|-------------------------------|---------------------------|----------------------------|------------------------|-----------------------------------------|----------------------------|------------------------|------------------|
| <b>Quality Assurance Criteria</b>     |                     |                              |                             |                |                       |                           |                |                               |                           |                            |                        |                                         |                            |                        |                  |
| Program                               | -                   | -                            | -                           | Sat            | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| * Training & Qualification            | Sat                 | Unsat                        | Sat                         | -              | Sat                   | Sat                       | -              | Sat                           | Sat                       | Sat                        | Sat                    | Sat                                     | -                          | -                      | -                |
| Quality Improvement                   | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| * Documents & Records                 | Sat                 | Unsat                        | Unsat                       | -              | Unsat                 | Sat                       | Unsat          | Unsat                         | Sat                       | Sat                        | Sat                    | Sat                                     | -                          | Unsat                  | -                |
| * Work Processes (Incl. Item Control) | -                   | -                            | -                           | -              | -                     | -                         | Sat            | Sat                           | Sat                       | -                          | -                      | Sat                                     | -                          | Sat                    | Sat              |
| Design                                | -                   | Sat                          | -                           | -              | -                     | -                         | Sat            | Sat                           | Sat                       | Sat                        | Sat                    | -                                       | -                          | Sat                    | -                |
| Procurement                           | -                   | Sat                          | Sat                         | -              | -                     | -                         | -              | Sat                           | Sat                       | -                          | -                      | Sat                                     | -                          | -                      | -                |
| Inspection & Acceptance Test (*M&TE)  | Sat                 | Sat                          | -                           | -              | -                     | -                         | -              | Unsat                         | Sat                       | -                          | -                      | Sat                                     | -                          | -                      | Sat              |
| Assessment                            | Sat                 | -                            | Sat                         | Sat            | Sat                   | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Suspect/ Counterfeit Items            | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | Sat              |
| <b>Contractor Assurance Criteria</b>  |                     |                              |                             |                |                       |                           |                |                               |                           |                            |                        |                                         |                            |                        |                  |
| Program                               | Sat                 | -                            | Sat                         | Sat            | Sat                   | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Assessment                            | -                   | -                            | Sat                         | Sat            | -                     | -                         | Sat            | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Performance                           | -                   | -                            | Sat                         | -              | Sat                   | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Reporting                             | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | Sat                       | -                          | -                      | -                                       | -                          | -                      | -                |
| Lessons Learned                       | Sat                 | -                            | -                           | -              | Sat                   | -                         | Sat            | -                             | -                         | Sat                        | -                      | Sat                                     | -                          | -                      | -                |
| Issues Management                     | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Worker Feedback                       | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |
| Dissenting Opinions                   | -                   | -                            | -                           | -              | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | Sat                        | -                      | -                |
| Scientific Research                   | -                   | -                            | -                           | Sat            | -                     | -                         | -              | -                             | -                         | -                          | -                      | -                                       | -                          | -                      | -                |

\*Special review of risk areas.

## COMPUTING DIVISION BEST PRACTICES IDENTIFIED DURING AS-IS STATUS REPORT

**NOTES:**

Sat – All applicable criteria and associated controls were found to be formally or informally implemented. Does not address To Be Documents.

Unsat – One or more applicable criteria and associated controls were determined to not be implemented.

N/A – Indicates the criteria was not applicable to the process assessed

The dash "-" indicates the criteria was not assessed.

**Corrective Action Plans (CAPs) Status, and Associated Issues Identified to Date**

| CAP Number           | Brief Description of Problem or Opportunity                                                                                                                                                                          | Status |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| CAP CD-04/14/2009-01 | CD Records Coordinator has not submitted any RIDS to the FNAL Record Manager.                                                                                                                                        | W      |
| CAP CD-04/14/2009-02 | The Computing Division does not have a formal program in place for communicating and interpreting to its employees Director’s Policy #13.                                                                            | A      |
| CAP CD-04/14/2009-03 | The measurement and test equipment (M&TE) calibration policy is not documented and communicated.                                                                                                                     | W      |
| CAP CD-04/28/2009-04 | Contractor/staff badges are not being rejected by the computer room entry badge sensor automatically when TRAIN records indicate Computer Room Entry training has expired as required by approved CD ES&H procedure. | A      |

**NOTES: - CAP Status Codes**

W – Written by QAR

A - \*\*Accepted by Responsible Person

ID - In Development by Responsible Person

APA - \*\*Action Plan Approved by D/S/C Head

APAQ - \*\*Action Plan Accepted by Quality

APBI – Action Plan Being Implemented by Responsible Person

IC – \*\*Implementation Completed by Responsible Person

CVQ - \*\*Closure Verified and Approved by Quality

CAR - \*\* Closure Accepted by Requestor (QAR)

CAH - \*\* Closure Accepted by D/S/C Head

OD – Over Due

\*\* Formal signature required